WORLD-WIDE

AIR TRANSPORTATION

AIR CARGO ★ ★ ★ AIR COMMERCE ★ ★ ★ AIR TRAVEL

FEBRUARY 1943

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Winging the Peace and Air Transp
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SINCE 1928 IN THE SERVICE OF THE AMERICAS

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PAN AMERICAN WORLD AIRWAYS will resume service to France on daily schedules beginning this month, with new 47 passenger *Constellation*-type Clippers.

The purchase of 23 new Martin 202s—18 by **Braniff Airways** and an additional 15 to be added to **Pennsylvania Central Airlines'** original order of 35—has been announced by the **Glenn L. Martin Company.**

TACA Airways will transfer its top executive, operations and traffic offices from New York to Miami, in order to bring all key TACA personnel together at a base closer to the company's actual operations. The present ticket office in Rockefeller Center, New York, will remain, with added staff.

A new four-page booklet on the personal plane radio, AS-IB, has been announced by the Transmitter Division of the *General Electric Company's Electronics Department.* Copies of the booklet (EBA-2), which describes the features of the radio and lists the technical specifications of the unit, are available on request to the publicity section, Thompson Road Plant, Syracuse, or G-E offices throughout the nation.

A simple, uniform aviation code should be adopted throughout the United States, according to **George Boochever,** general counsel, **Aviation Section of the New York Board of Trade,** in an address before the **Airline Traffic Men's Club** luncheon. Boochever pointed out that 48 State legislatures and many municipalities are passing innumerable and often conflicting laws affecting the aviation industry. He also urged an Aviation Panel under the direction of the American Arbitration Association be set up to deal with disputes and disagreements arising in the field of civil aviation.

Flying 21-passenger Douglas DC-3 airliners, **Pacific Air Line** is to resume passenger service this month between Los Angeles and Sacramento, with two scheduled round-trip flights daily between the two cities.

Fifteen airfields in **Poland** used by the Russian Army have been returned to Polish airlines.

Approximately 11,000 pounds of NEWSWEEK Magazine are being flown each week from Chicago to the Pacific Coast on chartered *Cargoliners* of **United Air Lines.** NEWSWEEK comes off the presses in Dayton early Wednesday morning, is shipped to Chicago by rail, and reaches the West Coast before midnight of the same day.

British Overseas Airways Corporation has opened an information and reservation ticket office on the street floor at 420 Madison Avenue, New York City.

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No. 2

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February
1946

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THE COVER—The war gave air cargo the needed spark. Here, natives of a country thousands of miles away, handle cargo flown in by a giant United States Army cargoplane. Today the commercial airlines are taking over the big business of flying cargo, setting a new pace for tomorrow's foreign trade. This picture is reproduced through the courtesy of the Chase National Bank of the City of New York.

JOHN F. BUDD, *Editor and Publisher*

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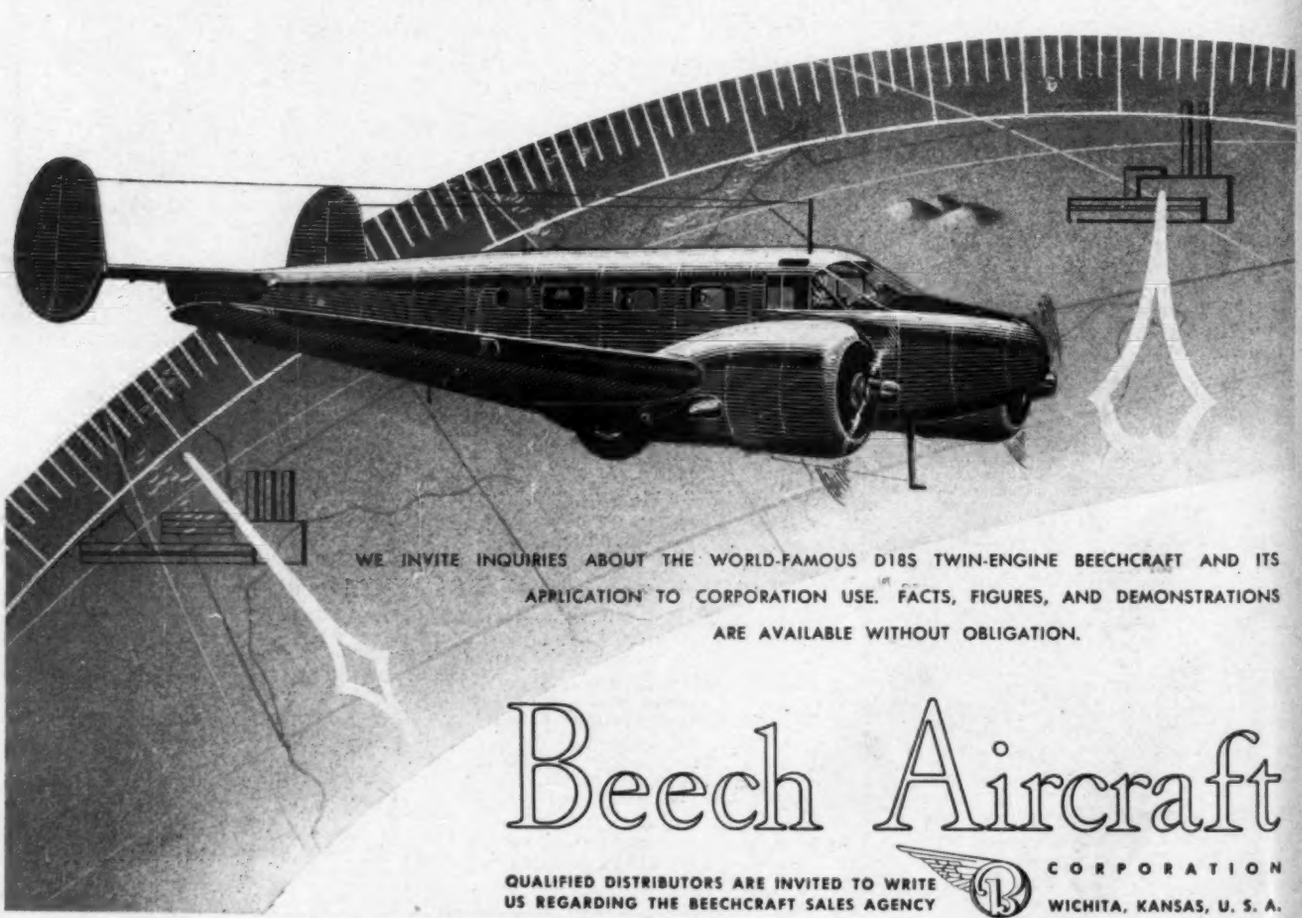
THIS message is directed to top executives of corporations now submerged in the millions of details of reconversion. If you operate two or more plants you should consider the advantages of corporation-owned aircraft in connection with the rapid solution of the problems of reconversion.

accelerate your reconversion

The war effort was enormously aided by the efficient air transportation systems operated to all parts of the world by our Armed Services. Combat theater commanders could consult with their Chief-of-Staff in Washington and be back at their jobs anywhere in the world three days (instead of thirty or forty days) later. This high mobility and opportunity for personal consultation unquestionably was a great factor in the close co-ordination of the war effort and materially contributed to the freedom from serious errors which marked the performance of our Army and Navy everywhere. . . . Corporations which have widely scattered operations can benefit as greatly by applying the same principles to their operations. Trips which ordinarily require days of the time of key personnel can be cut down to hours. The tempo of reconversion and peacetime production can be correspondingly accelerated.



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Bermuda Air Pact

FEBRUARY turned up as an extremely important month in Anglo-American relations when, after four weeks of negotiation at Hamilton, Bermuda, an air agreement was signed by Great Britain and the United States. The pact provides for full and free development of international air transportation.

Taking effect immediately, the agreement covers the regulation of fares, removal of restrictions on the number of flights by civil airlines and the setting up of international routes. The Fifth Freedom of the Air came into its own with the Anglo-American decision to permit airlines operated by both countries to pick up passengers traveling to a third country. The only limitation is the power of either Government to protest against any uneconomic effort by the airlines of one country to draw away the business of the other country, or of the local lines of a third country.

Also included in the agreement are provisions for the avoidance of profiteering and rate wars. The two nations are agreed upon non-discriminatory commercial use by airlines of all nations of bases constructed by the United States at Bermuda and in the West Indies, contingent on a similar agreement covering the Canadian and Newfoundland bases.

Following is the complete text of the joint press release of the United Kingdom and the United States delegations on the decisions of the Bermuda Air Conference:

1. Three documents, two to be signed and one to be initialed in Bermuda at 23:00 hrs., GMT (7:00 P. M. Bermuda time, 6:00 P. M. Washington time), on Monday, Feb. 11, represent the work of the Anglo-American Civil Aviation Conference, which has been in session there since Jan. 15.

2. The documents agreed upon at the Bermuda Conference represent a sincere and determined effort to reconcile the widely divergent views which were held by the two nations on the extent to which international air transport should be subject to governmental controls. The two Governments are happy to announce that agreement has been reached on conditions which they believe will be satisfactory and advantageous to both nations.

3. The three documents are:

(i) The final act of the conference.

(ii) A bilateral agreement between the Governments of the United Kingdom and the United States and an attached annex.

(iii) Heads of agreement relating to the civil use of leased air bases.

4. All the chief aspects of civil aviation outstanding between Britain and America are covered and resolved in these three documents. They should provide a firm foundation on which future and closer aeronautical collaboration between the two nations can be built. Both nations had before the Bermuda Conference accepted the multilateral Air Transit Agreement at the Chicago Air Conference, which provided for freedoms i and ii; that is, the right of the air carrier or carriers of one nation to fly through the air space of the other (Freedom i) and to land for non-traffic purposes (Freedom ii).

Broad Policy Formulated

5. The chief feature emerging from these conference documents is that the broad policy agreed between the two Governments offers an opportunity for the development of air transport coupled with provision for later review and adjustment of any practices which are shown by experience to be harmful to the best interests of the two nations.

6. In brief, the highlights resulting from the conference are:

(I) Rates to be charged by air carriers operating between points in the United Kingdom and points in the United States are to be subject to governmental review.

(II) The Civil Aeronautics Board has announced its forthcoming decision approving the traffic and rate conference machinery of the International Air Transport Association (IATA) for a period of one year. (Section ii of the Annex.)

(III) Freedom by each country to determine the frequency of operations of its airlines.

(IV) Freedom to carry fifth freedom traffic in accordance with defined principles subject to adjustment in particular cases where such adjustment may be found necessary in the light of experience. (Section I of the Annex, and Paragraph [6] of the Final Act.)

(V) Agreement on an initial schedule of world-wide air routes of mutual interest to the United Kingdom and the United States (Section III of the Annex).

(VI) Clearing of the position of the air bases leased by the United Kingdom to the United States so that they may be opened for civil use as soon as possible wherever such use will contribute to the over-all development of civil aviation along sound economic lines. In effect, this means that when the agreement is finalized the leased bases at Bermuda, Antigua, St. Lucia and British Guiana will be opened for full civil use while other bases will be available for civil aircraft as bad-weather alternates to existing civil airports. The United States has conditioned its approval of the agreement upon the working out of a satisfactory agreement covering similar problems as regards bases and air fields in Labrador and Newfoundland. (Heads of agreement on leased bases).

(VII) Agreement that in general any dispute between the two nations relating to the interpretation or application of the agreement which cannot be settled through consultation shall be referred for an advisory report to the Provisional International Civil Aviation Organization (PICAO) or its successor. (Article IX of the Agreement.)

7. The Final Act of the Conference

This document brings together in one place the different documents of the conference and sets out the principles for the development of international civil air transport to which the two Governments have agreed to subscribe.

The deliberate trend of these principles is to encourage the use of air transport and to stimulate air travel at economic rates. At the same time the principles provide for fair and equal opportunity for air carriers of the two nations to operate between their respective territories and to provide air transport facilities matched to the needs of the public. The fair and equal opportunity referred to above does not imply the allocation of frequencies by agreement, but only the right of each nation to offer the services it believes justified under the principles agreed to.

Special consideration is also given to safeguarding the rightful interest of both countries, and to bridging the period during which difficulties resulting from the war might militate to the prejudice of either country.

An important principle is that outlined in Paragraph 6 of the Final Act. This paragraph, in referring to the carriage by air carriers of one of the two nations of so-called "Fifth Freedom" traffic, that is, passengers and cargo between two foreign countries, recognizes this Fifth Freedom privilege, granted in the Annex, so long as the carriage of these loads does not defeat the primary objective of the agreed international air services, which is to provide air transport adequate for the traffic between the country of origin of the aircraft and the country of destination of the traffic.

Capacity Rules Outlined

To this end, the right to carry "fill-up" Fifth Freedom traffic is to be subject to the general principle that capacity should be related to:

(i) The traffic requirements between the country of origin and the countries of destination;

(ii) The requirements of through airline operation, and

(iii) The traffic requirements of the area through which the airline passes after taking account of local and regional services.

Thus, the privilege of carrying Fifth Freedom traffic has been reciprocally granted subject to the considerations indicated above.

Another important principle agreed on and set out in the Final Act is that (in Paragraph 11) which provides for regular and frequent consultation between British and American Government authorities, in fact the CAB and the British Ministry of Civil Aviation to insure that there shall be close collaboration to implement and develop the understandings arrived at in Bermuda, and to provide for the solution of new problems of interest to both nations in the field of civil aviation.

8. The Bilateral Agreement

This agreement follows the line of the standard form of such agreements as drawn up at Chicago.

It contains 14 Articles which define the conditions under which air services (i.e., regularly scheduled airline services) shall be operated between the territories of the United Kingdom and the United States. (Details of the routes are set out in Section III of the Annex.)

The agreement sets out (Article 8) that modifications to the Annex (other than the route changes provided for in Section IV of the Annex) may be made after consultation and agreement between the aeronautical authorities of the two nations.

(*Concluded on Page 54*)

Admiral Emory S. Land

A Thumbnail Sketch

Naval aviation observer . . .

Helium expert . . .

Assistant Chief of the Navy's Bureau of Aeronautics . . .

Vice president and treasurer of the Daniel Guggenheim Fund for the Promotion of Aeronautics . . .

Member of the National Advisory Committee for Aeronautics . . .

Qualified pilot at the age of 50 . . .

Sounds like a description of one of the country's leading aviation figures. That is right. The man it fits is one of flying's greatest enthusiasts. He has now stepped nearer the front of the aviation stage as president of the Air Transport Association of America.

But more people would recognize him as builder of the world's largest shipping fleet, as one of the foremost authorities on battleships, submarines and airplane carriers—Vice Admiral Emory Scott Land.

Whether it is hulls or wings, Admiral Land is equally versed in the quickest way to get the most passengers and the most cargo to the point of destination. His job as War Shipping Administrator was so outstanding as to make folks forget about his earlier roles in aviation, but its significance is clear on his new job of helping develop the future of the 24 United States flag airlines.

Curiously enough it was in 1926, when the first scheduled airlines in this country went into operation, that Admiral Land became assistant chief of the Navy Bureau of Aeronautics. Several years before that he had won his rating as a naval aviation observer and served on the Army and Navy Helium Board.

His progressive grasp of aviation led the Daniel Guggenheim Fund for the Promotion of Aeronautics to borrow him from the Navy in 1928 as vice president and treasurer. It was during that period that he learned to fly.

Back in the Navy in 1930, he became Chief of the Bureau of Construction and Repair, but always flew wherever his duties called. And so it continued, when, after retirement from the Navy in 1937, he promptly put on harness again for the Maritime Commission. He was enabled to push work on our stupendous fleet of ships, which so largely helped to win the war, by his own constant use of the airplane.

But the reputation Admiral Land created for flying in any weather, when even the crows walk, is matched by his passion for safety, for the development of safety was one of his noteworthy achievements with the Guggenheim Fund.

U.S. Route-Miles Are Now at All-Time Peak

The network of air routes available for the transportation of passengers, air mail, and cargo in the United States was increased by 4,042 miles last year; and the total number of route-miles which the domestic airlines are now authorized to fly has reached the all-time high of 66,979.

The year was also a record-breaker in international operations, with the Civil Aeronautics Board having granted three carriers of the United States certificates for routes across the North Atlantic through Europe to Russia and India. CAB examiners made recommendations for service across the South Atlantic and the Pacific, but these have not been finally decided.

International route-miles certificated at the end of 1945 totaled 106,197 miles for the United States carriers. The principal segments of the overseas routes were as follows:

American Overseas	9,208
Pan American (Atlantic)	28,718
Pan American (Latin American)	18,050
Pan American (Pacific)	18,297
Pan American (Alaskan)	1,579
Panagra	9,786
TWA	20,539

The principal awards of new mileage in 1945 involved seven domestic carriers, and occurred prior to September 30, while others related to comparatively minor terminal changes. The largest single new extension was made when Delta Airlines received a certificate to add 1224 miles to its system. From Cincinnati it was authorized to serve Chicago via Anderson, Muncie, and Newcastle; from Knoxville it was permitted to fly to Asheville and Greenville-Spartanburg; and from there one branch goes to Columbia and Charleston, South Carolina, while another goes to Augusta, Savannah, Brunswick, Jacksonville, and Miami.

American Airlines added 653 miles as a result of reshuffling of three routes in the Northeast section of the country. This company also gained 43 miles as a result of linking Syracuse, Elmira-Corning, Binghamton, and Scranton-Wilkes-Barre.

Mid-Continent linked New Orleans with Tulsa, via Shreveport, Texarkana, Fort Smith and Muskogee with a gain of 584 miles. Continental was certificated for 519 new miles with a route between Hobbs and Tulsa via Lubbock, Wichita Falls and Oklahoma City. Eastern added 693 miles with an extension from Columbia, South Carolina, to Detroit via Charlotte-Winston-Salem, Greensboro-High Point, Roanoke, Charleston, Akron, and Cleveland.

Colonial was given a 715-mile addition by route extensions providing a link between Washington, as well as New York, with Ottawa, as well as Montreal in Canada. From Washington the new setup takes Colonial through Baltimore, Reading, Scranton-Wilkes-Barre, Binghamton, Syracuse and Watertown to Messena, New York. Thence one branch goes to Ottawa and the other to Montreal.

Pennsylvania-Central gained 46 miles and a link between Rochester, and Washington, D. C., with a route that will now tie in Williamsport, Elmira-Corning, Rochester and Buffalo.

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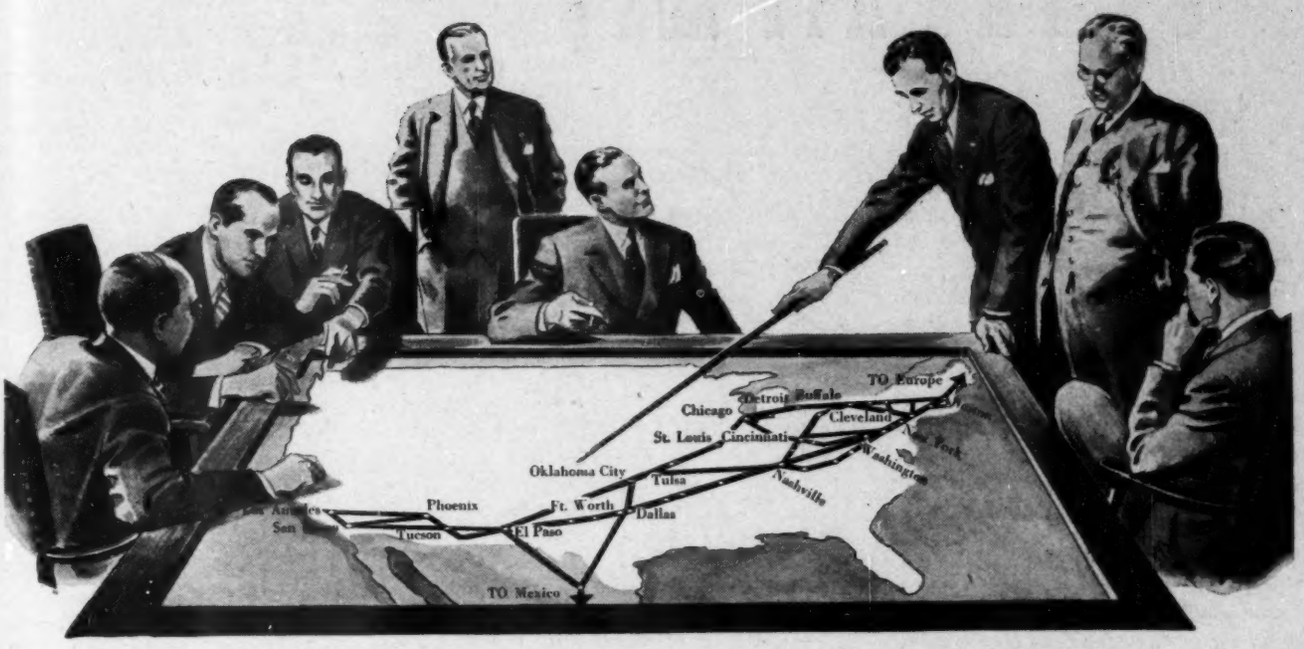
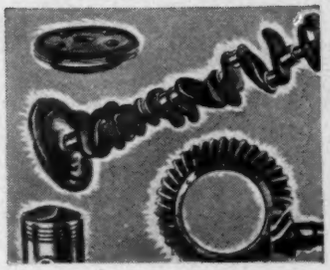


You can expand your present markets and build new and bigger markets through day-in, day-out use of Airfreight. Our Airfreight sales engineers and research experts are ready to show you how swift, low-cost Airfreight can work for you.



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AMERICAN AIRLINES *System*

THE NATIONAL AND INTERNATIONAL ROUTE OF THE FLAGSHIPS

Every Community On The Air Map

By JOSEPH GARSIDE
President, E. W. Wiggins Airways

NOT long ago—so recently that the changes which have taken place in the intervening years seem incredible—I sat in an audience and heard a prominent aviation executive say that cargo-carrying by air was an impractical dream. He *proved* it with figures. About the same time another authority, a man of equal prominence in his own line, proved conclusively that no airplane could ever exceed a speed of 400 miles per hour.*

Knowing what has happened to those predictions, as well as a lot of others, during the past few years, you might think people would be a little slow to make forecasts on the conservative side; yet there are people today who will tell you that air transportation is only for our larger communities; that relatively short hops between the smaller cities and towns are costly and impractical, and therefore aviation might as well yield the short-haul field to surface carriers for all times.

I suppose you might say these people have a lot of courage. It certainly doesn't take a very brave man to stand up today and make enthusiastic predictions. So many Buck Rogers gadgets have come true in the past two or three years that the more fantastic a forecast, the more likely it seems to be true. I do not feel that I am likely to be classed as a radical when I say that in my opinion feederline service and charter service by air are destined to reach nearly every community in the United States within the next few years.

Many of you probably remember the things that were said about the automobile in the early years of this century. I understand it was popularly believed that the automobile could never replace the horse except on trips over a few main highways, because the cost of building paved roads in the smaller communities would obviously be too great. I am sorry to say that a lot of people in this country had an opportunity to observe during the recent war how valuable the horse still can be—but it wasn't for transportation.

All aviation today is boiling and seething with ideas and enthusiasms, optimisms and pessimisms, hopes and inhibitions. I think all of us who have been in the business for more than a few years, have some of the inhibitions. We have known how really small the business has been in comparison with the amount of noise it has made in the public ear; we have been intimate with the very real obstacles that are encountered in making aviation give service and pay dividends as a transportation system; obstacles that we have, of course, tried to minimize in talking to the public. It is not strange that we in the business have been sometimes cheerful one day, gloomy the next.

Real Optimism

But if you shake us up together, you will find that we average out to a steadfast conviction that aviation will grow, and in good time will reach out to every nook and corner of this great nation; to the small towns as well as the great cities. I believe that this is not only possible, but *inevitable*. I believe there is no question that it *will* be done; that the doubt is only *how* it shall be done—and how soon.

Joseph Garside

I am no economist, but it appears to me to be fundamentally wrong to say that any time-saving advancement is impracticable simply because it is costly. Since the very earliest days of humanity, we have improved and enriched our lives at every turn by saving time. Each human being has a measure of time to spend. The less that time is consumed unproductively, the more will be his contribution to his society.

The prophets were wrong when they said that automobiles would never travel every road in the nation. We travel those roads now, to the smallest cities and towns. Is it more expensive than to ride a horse? Tremendously so. Have we lost by it? Of course not! We have saved so much time, and thereby increased our productivity, that we have been greatly enriched as a result.

I do not mean to say that travel by air from town to town is going to be a very expensive thing, either. With our present equipment it is more expensive than to travel the same short routes by bus or train or automobile. But volume will reduce the cost to a reasonably competitive scale.

I do say that even during the intervening period when rates for short hauls must remain comparatively high, there will be a great many people who can and will use this service economically because of the saving in time. And those people are going to insist on having that service, because they have learned during the war how important a saving in time can be.

No, it isn't a question of whether or not we shall have a charter service and feederline service by air to every community. The questions are what form these services shall take, and how soon they can be brought into being.

There are observers who say that the cost of enough airports to make such a nation-wide service possible is prohibitive. I do not intend to tackle the air-

* On January 26, 1946, a Lockheed *Shooting Star* averaged 584 miles an hour in a transcontinental flight.

The Author

JOSEPH GARSIDE was born in Boston 32 years ago. After studying at the Massachusetts Institute of Technology, he entered the employ of E. W. Wiggins Airways, Inc., Norwood, Massachusetts. That was 14 years ago.

One of the youngest pilots ever to fly in this country, he soloed at the age of 14. Civil Air Regulations prevented his receiving a license for two years; but as soon as he reached his sixteenth birthday, he successfully passed his examination for a private certificate. A few years later he became a commercial pilot—a rating he still holds.

Carside's first administrative responsibility was as manager of the Norwood Base of the Wiggins company. When the company's operations expanded, he was made operations manager, supervising the activities of several bases. When the war broke out, he was placed in charge of all operations in the East. He also directed the training of hundreds of pilots in the War Training Service program at Concord, New Hampshire.

The young airman was made president of E. W. Wiggins Airways, Inc., in July, 1944, and has served as general manager since the death of its founder in October, 1944. He is prominent in New England aviation circles.

port question to any extent, but I would like to ask you to picture the face of any good citizen of the year 1910 if you had suggested to him spending the number of billions of dollars that it has taken to pay for our highway system. Yet those highways, which would have been incredible in 1910, have not been a burden. On the contrary they have enriched us—by saving time.

Time-Saver

Our long-haul airline passenger service, in its infancy, proved that it could save time. That was enough to give it a start, even though in the early days one could not even be sure that the airline would operate according to its schedule. Furthermore, the cost was quite high as compared with other forms of transportation. The passenger had to weigh questionable dependability and high cost against the value of his time. On that basis the airlines grew and flourished, overcame their difficulties one by one and created the highly dependable and economical airline system that we enjoy today. Our enjoment of it is somewhat tempered today by the lack of available seats, but my airline friends assure me that this annoyance is temporary.

To be sure, the airlines had the benefit of a progressive and far-sighted Government policy that recognized their needs and helped them to grow. That same policy of development can be applied to the short-haul service.

I have used the phrase "short-haul service" to include both the so-called "feederline service," which is practically non-existent so far, and "charter service," which has been with us a long time but has grown up slowly, unguided, and more or less as an orphan. The two are quite distinct from each other, of course, though they serve a common purpose in giving service to communities not now reached by the regular airlines.

Two Futures

In considering the destiny of the little-known feederline service we come first to the question of where the dividing line lies between this and the airline or trunkline as we know it today. If we grant that every community of reasonable size is to be served by air, we must ask ourselves in each case whether the service will be by airline or by feederline. Unquestionably, trunkline service is coming to many more cities and towns than are enjoying it today. Many points not now being served are already certificated and service to others is under consideration in numerous applications awaiting action of the Civil Aeronautics Board. But the future of the trunkline appears to lie in the operation of larger, faster and more luxurious aircraft. The trunkline is constantly reaching out to carry its service to distant parts of the country, and to other countries. It is logical that they should seek to establish a criss-cross pattern of routes to blanket the whole area of their operation, but by the very nature of the service they offer, their airplanes become less and less suited to stopping every few miles.

The feederline, while it will endeavor to emulate its big brother in the physical aspects of its operation, has a very different aim in life. Its purpose is to start at the airline terminal and spread out in every direction to carry people and packages to the smaller cities and towns that the trunklines do not reach. In all probability, the principal users of the feederline will be travelers going to or from an airline terminal.

There is another aspect to feederline service which is more difficult to evaluate. That is local traffic—transportation from one community to another nearby. I cannot help feeling that people expect to have service by air from town to town, as well as from town to airline stop, and what the people expect in the way of public service they usually get sooner or later. For the present, however, there will be many communities where the airport is located so far from the center of town that a trip to the next town will be easier and quicker by road. That is something for our Town Fathers to keep in mind when they are seeking out sites for their airports. Of course the helicopter

HANGAR FLYING

LOCKHEED

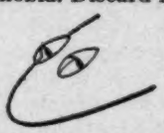
6 Designs for a Windshield

The people in the Engineering Research building at Lockheed, Factory B-1, Burbank, point out that the unique windshield design on the *Constellation* didn't just happen. Five experiments preceded it.

Windshield No. 1 went into a completely faired nose. It looked good on paper, but when it was mocked up Lockheed found that vision for pilots was bad.

Type 2 was an attempt to put the crew "downstairs". This turned out to be a failure because it would have been pretty uncomfortable in a belly landing. This is the way it looked:

The engineers next tried two small bug-eyes, which were successful only in giving the crew claustrophobia. Discard No. 3:



A wide, single bug-eye type was tried next, but was found difficult for pressurization.

Fifth was a conventional "Vee" windshield, but the fuselage was too big to allow for an effective design.

The sixth windshield was adopted. Besides being the lightest of all, its many small panels give excellent vision angle as well as convenient control and instrument arrangement.

This kind of inspired persistence is going on all the time at Lockheed—the kind that makes good planes and good telling.

L to L for L

©1946, Lockheed Aircraft Corp., Burbank, Calif.

may enter into the picture at this point, but the helicopter is still very much of an unknown quantity.

Since feeding passengers to and from the airlines will be a major part of the work of the feederline, it becomes obvious that the two must work together very closely. To conduct such a short-haul service might be burdensome and expensive to the carrier whose organization is geared to long hauls and a high volume of traffic, but it may develop quite profitably for the carrier whose operation is equipped from the start to do that special job.

Charter Service

The second type of service is generally known as charter service. In my company we call it personal plane service. It is personal because it serves your special needs, apart from the desires or destinations of any other passengers. Right now it is more of a bone of contention in the industry than feederline service, because it is under scrutiny by the CAB to see whether or not it needs what is known as "regulating."

The charter carrier, though he performs a real service to man by saving precious time, has not been blessed with the attention and financial assistance of the Government. I often wonder if our lawmakers did not overlook the importance of this phase of air transportation when they enacted the Civil Aeronautics Act of 1938—or perhaps it is the interpreters of that law who have passed too lightly over the possibilities of non-scheduled carriers. I say this not as a rebuke to those who created or those who have carried out our air policy—for they have done a magnificent job of fostering the best air transportation system in the world—but rather as a thoughtful reflection in the light of the years of experience which we have now had. Progress on the problems of the scheduled carrier has been swift and sure under the stimulus of economic guidance and financial assistance. Who can say what progress might not have been made in the non-scheduled field if that same stimulus had been applied?

As matters stand, the charter carriers are using the same methods and the same equipment, in most instances, that they used 10 years ago. We must look for some exciting factor that will start the cycle of a more dependable service and lower cost, which in turn create more business and make possible a still better service.

What will this stimulant be?

The CAB recently conducted a hearing in an effort to arrive at the facts concerning charter service. I believe that we in the business are generally agreed that the examiners deserve much credit for the manner in which they attempted to reach a solution to the problem. Their recommendations as a whole, however, are not good either for the industry or the public. There has been no amount of price competition, so there is no immediate need for economic regulation from that viewpoint. The proposed economic regulation includes nothing that will act to stimulate the business. It simply puts a lid on an empty pot!

If the Federal Government is going to concern itself with the economics of charter and other non-scheduled aviation, then it must, to be consistent, assume the same responsibility for developing the service into a sound air transportation system. This was done for the scheduled division of the business, with notable success and with all credit to the Government. If no such stimulating force is created by legislation, let us see what other things there are that may influence the growth of charter operations.

Number One Problem of the charter operator is to create a dependable service at reasonable cost.

Number Two Problem is to merchandise it.

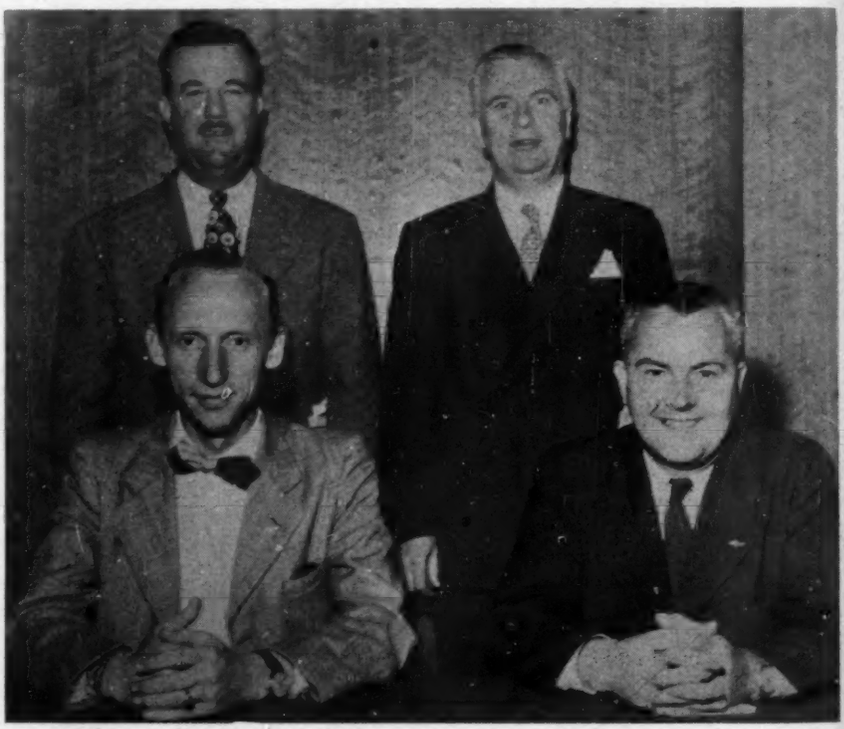
The ultimate in charter service will be to take the customer to any community, under any conditions, and at any hour. This means that our long-range airport program must have as its final goal complete all-weather facilities for every community.

Important Factors

A dependable service must not only deliver the customer safely to his destination, but must also give him confidence by having all the *appearances* of dependability. Based on his experience with the airlines, the customer of a charter service expects to get a quotation on his trip while he holds the line. He expects to be called in advance if the weather is doubtful. He expects an adequate fleet of scrupulously clean airplanes, courteous pilots, with uniforms neatly pressed.

I think all of us who have operated charter services will admit that more often than not, the customer fails to get that complete service, which in his mind is associated with dependability and safety. Some operators may say that there hasn't been enough income in the business to run the kind of operation all of us would like, but I insist that until we do manage it we can never tap the volume that will bring in that income. If we do achieve that good, dependable service, on a nationwide scale, then merchandising the service will become comparatively easy in the hands of experienced agencies.

Let us suppose that we have our house in good order with respect to



FEEDER AIRLINES ASSOCIATION OFFICERS—Four of the five guiding stars of the Feeder Airlines Association as they appeared at a recent meeting. Standing left to right are Joseph J. Mitchener, Jr., Washington, D. C., executive director; and Harry R. Stringer, of All American Aviation, director and former president. Seated left to right are Thomas H. Davis, of Piedmont Aviation, secretary-treasurer; and Bowman R. Otto, of Otto Airlines, president. Oliver L. Parks, of Parks Air Transport, vice president of the association, was absent at the time this picture was taken.

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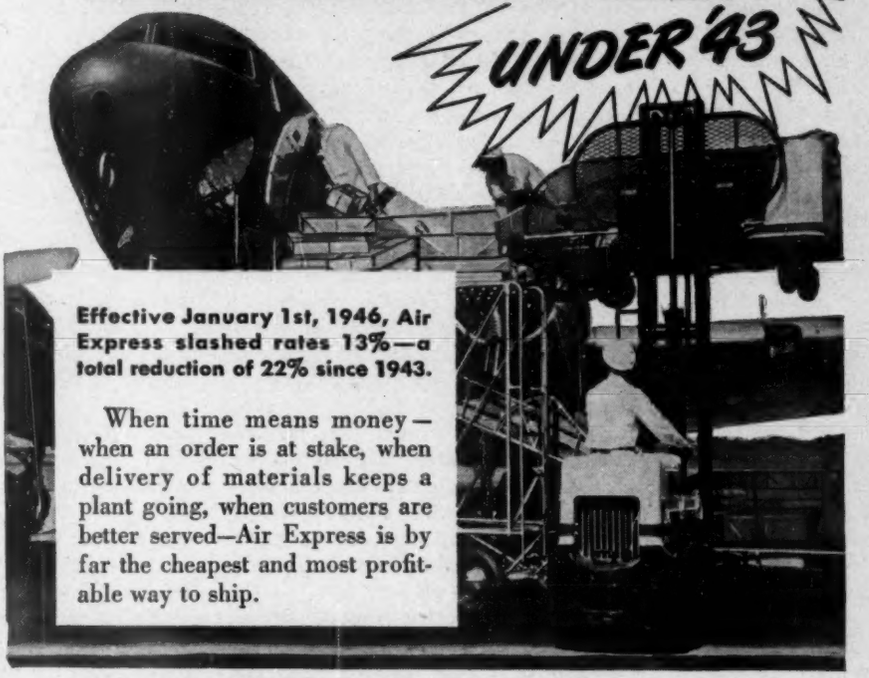
UNDER '43



Effective January 1st, 1946, Air Express slashed rates 13%—a total reduction of 22% since 1943.

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Shipments travel at a speed of three miles a minute between principal U. S. towns and cities, with cost including special pick-up and delivery. Same-day delivery between many airport towns and cities. Rapid air-rail service to and from 23,000 off-airline points in the United States. Service direct by air to and from scores of foreign countries in planes made in America, operated by American personnel and flying the U. S. flag.

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149	$1.00	$1.00	$1.00	$1.23	3.07
349	1.02	1.18	2.30	3.68	9.21
549	1.07	1.43	3.84	6.14	15.35
1049	1.17	1.98	7.68	12.28	30.70
2349	1.45	3.53	17.65	28.24	70.61
Over 2350	1.47	3.68	18.42	29.47	73.68

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CESSNA IN FLIGHT—The Cessna UC-78 as seen from another plane. "Until the Government declared Twin Cessnas surplus," writes the author, "there was almost no multi-engined equipment within financial reach of the great majority of charter operators."

appearances. What are some of the other aspects of this charter service?

The chartered airplane provides a service somewhat similar to that of a taxi on the ground. Traditionally, a taxi accommodates from four to six passengers. Aircraft available to charter operators in the past has fallen somewhat short of that capacity, providing two to four seats.

Safety is an element of dependability, and safety dictates the use of multi-engined equipment for an all-weather, day-or-night operation. While there has been a wide choice of single-engined equipment, there has in the past been a very limited choice of light multi-engined planes. Until the Government declared Twin Cessnas surplus there was almost no multi-engined equipment within financial reach of the great majority of charter operators.

This equipment is now available in surplus, but it increases the direct cost of operation per mile. The cost can be held down by using single-engined equipment for day contact operation, but we must consider the possible element of extra cost here due to the operation of more than one type and make of plane and engine. If use of the Cessnas and other surplus aircraft results in better service and increased use of charter flying, no doubt the airplane manufacturers will read the handwriting and furnish suitable equipment designed especially for operation in charter service at low cost per mile.

The per-mile cost of labor and parts is reduced as the hours flown by each aircraft per day is increased. Careful management and supervision in both the flight operation and the maintenance department are essential. Every hour of the aircraft's existence is a possible revenue hour, and even the smallest operator cannot afford to lose sight of that fact, for more use can bring lower rates. As in almost all businesses, the indirect hourly cost or cost per mile decreases sharply as the use increases. The trick is to be able to anticipate your revenue with enough accuracy to establish a reasonable set of rates. Once this starting point is established, and actual income and expense figures begin to accumulate, the operator can feel his way along toward reducing rates and consequently increasing his business and his net profits. The cost of the service to the customer is one measure of the use he will make of it. The market for the service broadens as the rate goes down.

The most common demand at present is for emergency use, when the customer must get from Point A to Point B as quickly as possible. The present rates are reasonable because of his great need to save time. But this constitutes a very limited market, and if our equipment and our rates are geared only to this market we probably will never enjoy much volume.

There is a broader market. It includes all of the people who now choose Pullman or airline in preference to other modes of travel. It includes all people of reasonably good income who value their time—and you don't have to be a busy executive to do that.

If the operator can find a way to break into this mass market he may be amazed at the result. I do not mean that he can compete, or should try to compete, in charter rates, with other forms of transportation, or even to compete with them in convenience along established routes. But the mass market has different levels determined by existing routes, frequency of service, travel time, and the personal consideration of the traveler. At certain level, there is business for the charter service.

For a parallel, look at the surface transportation picture. Boats, trains, trolley cars and buses run on frequent schedule over practically every route and street, yet we find people traveling over these routes in private cars and taxis, sometimes paralleling and sometimes varying only a little from the beaten paths of the common carriers.

A 100-mile trip by bus costs $2 and takes about three hours. The same trip by train costs $2 for coach travel and $4.50 for Pullman, and takes two hours. The airline fare is $4.50 and the travel time is 40 minutes.

For the same trip the charter customer pays about $25, if he is traveling alone. He is paying for three or four seats, whether he uses them or not, and he pays for the empty trip back as well. But the cost per passenger is much lower if the other seats are occupied. Herein may lie a possible means of increasing the market for charter service. On a bus, train, or airliner, one pays a fixed fare.

"But," one may say, "a charter service is basically different. It is more like a taxi service, and taxis charge by the meter regardless of the number of passengers."

True enough, but not all taxis follow this system. In Washington, for example, each occupant of a cab pays 20 or 30 cents. I can't believe that the average Washingtonian doesn't make more use of taxi service than people in other cities where the charter scheme of rates is employed.

Could the average passenger load on a non-scheduled service be high enough to justify adopting a per seat-mile rate instead of a plane-mile rate? The average number of passengers is higher than one, and might prove by experimentation to be higher than two. If an average is obtained by actual trial-and-error, a per seat-mile rate can be fixed that will yield a fair profit. I offer this as a theory yet to be proved. If it works, it will bring non-scheduled air service within the reach of more people.

No doubt the public will always ride on buses, trains and boats. But the public has been taught during the war what airplanes can do. The public *does not* want to wait for traffic lights when it is in a hurry. The public *does not* want to make a tiresome trip over a bumpy road before it can board a luxurious airliner at a terminal 20 miles distant. The public will buy charter service and feederline service just as fast as the operators can offer a service that is dependable and reasonably moderate in cost. The average citizen of this country is convinced that air service in one form or another is going to be brought reasonably close to his own home, and he is ready to use it right now. There are problems of equipment and rates to overcome, but those problems are not insurmountable, and every community of this nation eventually will have air service of one type or another—of that I am sure.

By NIGEL TANGYE

WHEN, early in the war, Prime Minister Churchill agreed with President Roosevelt for the British industry to forego the construction of transport aircraft, he was, at a moment of dire need, consciously hamstringing British postwar civil aviation. For the sake of exerting the maximum pressure on the enemy the industrial potentialities of the two countries were pooled. From the military point of view this paid tremendous dividends, but with the war over British aviation is inevitably paying a big price.

With the sudden cessation of lend-lease, which was inevitable and about which we do not squeal, British airlines are cut off from new aircraft and replacements; and this at the very time when the need for expanded and intensified services throughout the world is paramount. The planning staff of the British Overseas Airways Corporation, in whom has been entrusted by the Government the ultimate control of all our air services, sits restlessly in a Stygian gloom while British factories strive to replace bombers with transports.

The production of a new type of airliner is a complicated business these days, and it will be many months before a fleet is at the disposal of BOAC. I am lucky to number many Americans among my close friends, having served the last 18 months of the war on the personal staff of General Carl Spaatz. I therefore know that I am not crying for the moon when I ask those in America who may be criticizing British aviation policy to bear the foregoing facts in mind.

Britain was one of the earliest of nations to appreciate the potentialities of the airplane as a means of communication. During the period between the two wars, she pursued a policy of airline development which, though not as intensive as could have been wished, was nevertheless remarkable for its long distance schedules throughout the Empire. Only a month after the First World War ended Royal Air Force survey parties left for Cairo. Despite many difficulties, a survey of the route from Cairo to the Cape across the African deserts and jungles was completed by 1919. From this first flight grew air services which covered most of the British Commonwealth. Imperial Air ways Ltd., which was entrusted with the development and operation of these routes, operated certain stretches in co-operation with associate companies. For instance, on the Australian and New Zealand route Indian Transcontinental Airways operated jointly with Imperial Airways across India and down to Singapore. At Singapore, QANTAS Empire Airways took over, and finally Tasman Empire Airways flew the section between Sydney and Aukland.

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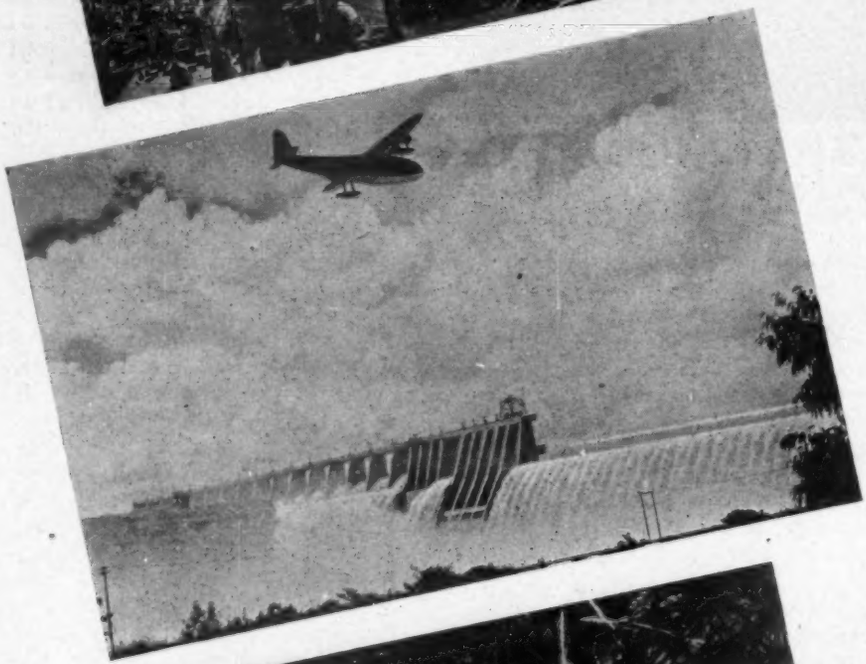
The author enters into a candid discussion on the current British aviation picture. Britain's achievements in the air are traced with relationship to the tasks ahead.

African Route

To Imperial Airways the United Nations owe an especial debt for the route they opened up many years before the war right across Africa from East to West, from Khartoum to Lagos on the West Coast. This is one of the most remarkable of air routes passing through El Obeid, El Fasher and El Geneina (all in the Anglo-Egyptian Sudan), Fort Lamy (French Equatorial Africa) and Maiduguri, Kano, Kaduna, Minna Oshogho and Lagos (all in Nigeria).

The organization and development of this route is one of the great milestones in our airport history. Long before the war, out of a wilderness of jungle, scrub and desert, amid sandstorms, tornados and torrential rains, a small band of British pilots and engineers carved an air route which later on, in the war against Nazism, was to become the United Nations' indispensable link with the battlefields in the Near East. If we had not developed this route, Rommel almost certainly would have been able to have conquered Egypt.

During this period of Empire development, Imperial Airways were also operating certain services in Europe. In 1937 began the series of transatlantic flights which led to the establishment in August, 1939, of a service between Britain, Newfoundland, Canada and the United States. And one should not forget another remarkable achievement. In 1938 all mail to Australia and South Africa was automatically carried by air without surcharge. No other country had adopted this principle of delivering mail by the fastest means without extra charge.



Less spectacular, perhaps, but remarkably efficient, were the activities of another British company. British Airways Ltd. was formed in 1935 by an amalgamation of five companies engaged in internal and external services. British Airways provided fast services between London and Stockholm, Cologne, Hanover, Budapest, Berlin, Warsaw and Copenhagen. The carriage of mail was an important part of the company's activities.

In 1939 Imperial Airways and British Airways were amalgamated by Act of Parliament to form the British Overseas Airways Corporation, a public non-profit-making corporation, charged with the development of British overseas air routes.

The war has checked the development of British air transport, mainly through the shortage of modern transport aircraft, but also through first preference being given to combat airplanes. But many new routes have been opened to serve the needs of war.

Valuable Know-How

The pioneering experience gained in the opening up of the routes from England to South Africa and the Antipodes stood Britain's Merchant Air Service well in wartime. When the Mediterranean was closed to civil flying, a new 5,000-mile route from Britain to West Africa was opened up at a few hours' notice without meteorological, wireless or ground services, to connect with the Transafrican route. The North Atlantic flying boat service, started just before the war began, was continued despite the ban on radio aids and severe limitations of weather information; and some of the pilots and ground staffs went in November, 1940, to Canada to organize the ferrying of American-built bombers across the Atlantic, and finally to operate a two-way landplane ferry service between England and Canada.

This latter service, as well as the others mentioned in this account, is still operated by British Overseas Airways. It runs across the most difficult Winter route in the world, and has been the outstanding achievement of British civil aviation in wartime. Savage Winter gales, often blowing at 50 to 60 miles an hour, ice and fog have to be fought by the pilots. The North Atlantic had

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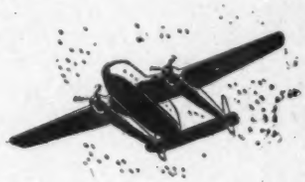
JOHN BULL WITH WINGS—Reading from top to bottom: A BOAC flying boat circling over Durban, South Africa, before landing in the harbor; a Lodestar passing over the famous Citadel as it reaches the ancient Egyptian city of Cairo; flying over the dam across the Vaal River in South America; the flying boat, Cleopatra, refueling on the waters of the White Nile at Laropi, Uganda.



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Air Shippers have their eyes on inland ports—the small cities with limited length runways.

Their interest turns naturally to the Fairchild "Packet."

For the "Packet"—expressing the painstaking research and precise engineering typical of *all* Fairchild operations and products—can:

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UNLOAD AND LOAD, swiftly, with a minimum of manipulation. The "Packet's" split-tail doors at the rear open up the entire width of the boxcar-like fuselage. The forward cargo door permits quick access to "up front" freight. The "Packet's" horizontal cargo floor is at truck-floor height.

GET OUT, fully loaded, with a short run. It has take-off characteristics highly exceptional for a plane of its large cargo capacities.

All these characteristics are invaluable to the shippers seeking to tap the rich markets of the interior. They are characteristic of the "Packet" alone among cargo planes, because the "Packet," from its conception, was designed and built *specifically* to carry cargo—efficiently and economically—anywhere! They are the Fairchild "touch of tomorrow" in this plane of today!

Cargo operators—write for details about the "Packet."

Fairchild Aircraft

Division of Fairchild Engine & Airplane Corporation, Hagerstown, Maryland

LONDON'S NEW GATEWAY—Aerial view of Heath Row Airfield on Great West Road, Staines, Middlesex. The new London airways terminus, which is expected to be completed before the Summer is out, will be one of the biggest in the world. It will have runways 10,000 feet long.

never been flown in Winter when the British Overseas Airways men took on this job in 1940. Many experts said it could not be done. But these were the men who years before had fought and conquered the deserts, jungles and swamps of Africa, Arabia and India, and had opened up Britain's Empire routes halfway round the world. They fought and conquered the wild North Atlantic Ocean, and have since been flying Winter and Summer 3,000 miles non-stop from Britain to Montreal. This British service has the proud distinction, apart from having been the pioneer on this route, of having been the only one to operate through four Winters.

War Record

Throughout the war years BOAC's services have been operated under conditions as different from normal airline operation as can be imagined. The routes over which it flew were governed by war needs, and not by commercial considerations. For instance, until a few weeks before V-E Day its aircraft could only leave the United Kingdom, or arrive, in the hours of darkness, and were in many cases constantly exposed to enemy attack. The highly developed route organization required for safe air transport operation, with rapid signals facilities, accurate weather reports, modern navigational aids and airport equipment, has been impossible under war time conditions.

Nevertheless, the corporation's aircraft have maintained communications to and through practically every war zone and often over enemy-occupied territory. The most daring of these services was the regular one to Stockholm which entailed flying some 800 miles across the North Sea and through the Skagerrak, both sides of which were occupied by the enemy who did everything in their power to intercept these unarmed aircraft and destroy them. To the ordinary radar aids and fighter patrols was added the potent fact that the BOAC office at Stockholm was next door to the German Lufthansa Office, thus affording the enemy unrivalled intelligence opportunities!

In spite of the dangers the service was maintained throughout the war enabling vital diplomatic missions to be accomplished, and providing freight facilities for precision goods invaluable to the British war effort.

By the end of the war BOAC's aircraft had, under the foregoing conditions, flown a total mileage of 57,100,000, carrying a total of 280,000 passengers and 50,040,000 pounds of cargo and mail.

British Overseas Airways not only inherits a great tradition, but it has in its service today most of the men who pioneered the overseas air routes in the years between the wars. Many of them have spent their lives in air transport; more than 60 of the men at headquarters have each over 20 years' service. More than 40 pilots have flown more than 1,000,000 miles each. A body of airline men with comparable experience of long distance operation, including experience in handling air passengers and air freight in such a variety of countries and climates, from the Arctic Circle to the tropics, would be hard to find.

The Author

NIGEL TANGYE is a well-known British radio playwright and author on aviation subjects. Educated for the Navy, he turned to journalistic pursuits. His books include *Air is our Concern; Red, White and Spain;* and *Teach Yourself to Fly.* He has served as flying instructor at the London Aeroplane Club and as a professional aviation consultant. Mr. Tangye also has been associated with Imperial Airways and British Airways.

Tasks Ahead

The tasks that lie ahead of the corporation are, as indicated at the beginning of this article, made more formidable by the legacy of war decisions. The men are ready to tackle the problems which dangle, for the time being, tantalizingly out of reach. They cannot get at them due to, in the main, the aircraft shortage which must persist for some time. The *Tudor* (built by A. V. Roe, who made the Lancaster bomber) on whom the corporation has pinned considerable faith, cannot be rolling off the production lines until the Summer. Thus existing air services along established routes cannot be reinforced to meet the demand for them, nor can new routes be opened up with the intensity of operation which is to be desired. Among these latter are the route to South America and the manifold services which await operation in Europe once the military complications have been resolved.

The British ariline position is similar to that of a jet fighter with not enough gas in its tanks to reach its rated altitude.

THE AVRO TUDOR I—Nigel Tangye points out that this plane, on which BOAC has "pinned considerable faith," will not be off the production lines before the Summer. The plane can accommodate 12 passengers in lounge chairs or twice that number if standard arrangement is used.

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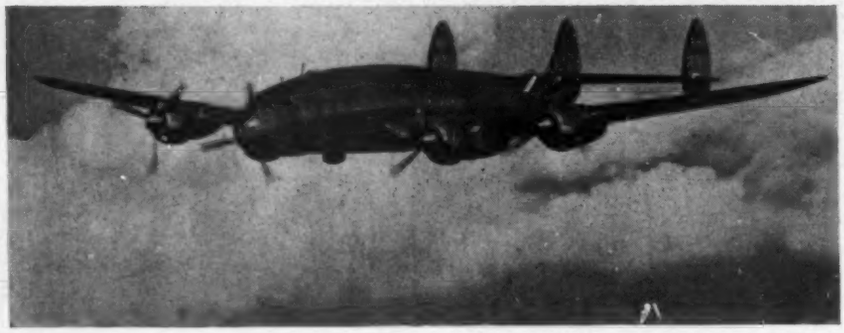
AIR FREIGHT SERVICE

TWA MAKES HEADLINES



WHAT with new speed records set and the inauguration of transoceanic air service to Eire and France inaugurated, Transcontinental and Western Air was very much in the news this month. And sharing the spotlight was the four-engined Lockheed *Constellation*.

It was on February 3 that a TWA transport with Jack Frye, president, at the controls, splintered the previous West-to-East coast-to-coast mark when it flew from Burbank California, to LaGuardia Field, New York, in only seven hours, 27 minutes, and 48 seconds. The flight was of great moment for a number of reasons:

1. The record clipped four hours, 27 minutes, and 12 seconds from the best previous time for the route, which had been set by the same airline 5½ years ago.

2. The 45 passengers aboard the plane—newspaper, radio, and magazine reporters and editors—constituted the largest number of passengers carried on a single flight. A crew of seven raised the total aboard to 52.

3. The day was the 20th anniversary of Jack Frye's connection with the airline business. It was exactly two decades ago that he inaugurated thrice-weekly trips between Los Angeles and Phoenix with a single old Fokker plane.

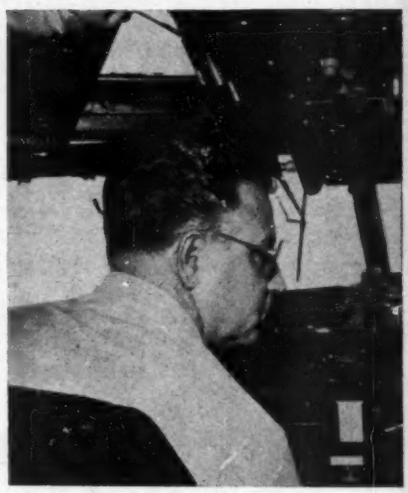
Carrying 4,050 gallons of gasoline and loaded to within 94 pounds of its gross loaded weight capacity of 90,000 pounds, the *Constellation* leveled off at 15,000 after the takeoff at Burbank. The initial report to the passengers was that the plane was doing 340 miles an hour; over St. Joseph, Missouri, the speed was clocked at 335 miles an hour. Tailwinds helped the speed up to 342 miles an hour over Bloomington, Illinois, reaching a peak of 375 miles an hour between Fort Wayne, Indiana and Haysville, Ohio.

Two days later, TWA made the headlines and newreels once more when the largest number of passengers ever to fly between the United States and Europe took off from LaGuardia Field in the *Star of Paris*, a plane similar to the one which had smashed the transcontinental record. The New York-to-Paris *Constellation* carried 38 passengers in addition to its regular crew of seven, and a diversified cargo of American products ranging from Kansas City steaks to a mercy consignment of penicillin.

The *Star of Paris* landed in the French capital exactly 19 hours and 36 minutes after a special audience of guests watched it roll into the sky from LaGuardia Field. Actual flying time was 16 hours and 21 minutes.

TWA flew the route from New York to Gander, Newfoundland; to Shannon, Eire; to Paris. Distance of the entire flight is 3,625 miles.

When the *Star of Paris* returned to



SETTING A RECORD—Jack Frye at the controls of the record-breaking TWA Constellation which raced from California to New York in less than 7½ hours.

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UPPER LEFT—Mrs. Jack Frye waves gaily after christening the TWA Constellation, Star of Paris. Beside Mrs. Frye are (right to left) Leo McCauley, Irish Consul General; Guerin de Beaumont, French Consul; Charles Haffenden, New York City Commissioner of Marine and Aviation; and Otis F. Bryan, TWA vice president. UPPER RIGHT—Passengers board the Star of Paris which will take them to the capital of France. LOWER LEFT—Cardinal-elect Thomas Tien of China receiving a handshake from Mayor William O'Dwyer of New York, as Cardinal-elect Francis J. Spellman looks on smilingly. Together with Cardinal-elect John J. Glennon, the prelates took off for the Holy City in the Star of Rome. LOWER RIGHT—The return of the Star of Paris brought token shipments of Parisian goods for New York, Chicago and Pittsburgh department stores. Here TWA cargo handlers unload the big transatlantic transport.

New York with a list of distinguished passengers, interest was also fastened on token shipments of French goods destined for Macy's and Gimbel's in New York, Carson-Pirie-Scott and Mandel Brothers in Chicago, and Kauffman's in Pittsburgh. The cargo included gloves, lingerie, gowns, handkerchiefs, leather goods, and fancy jewelry.

On the first Eire-to-United States record, the TWA *Star of Dublin* reached Hanscom Airport, Bedford, Massachusetts, 13 hours and 30 minutes after taking off from Shannon. This was a new nonstop record for this route, and it was set despite heavy headwinds all the way. A scheduled landing at Gander was passed up because of low ceiling and sufficient gasoline reserve to take the big transport into the United States. The plane went on to New York.

Then the *Star of Madrid* came into the picture. Thirty-nine hours and 28 minutes after the *Constellation* lifted from the runway at LaGuardia Field, it set down at Johannesburg, South Africa—the longest nonstop flight for a commercial plane. Flying a total distance of 9,792 miles, the TWA transport traveled from New York by way of Shannon, Rome, Athens, and Cairo. During the trip there was a 3,370-mile hop from Cairo to Nchanga, Northern Rhodesia.

For sheer human interest, the flight of the five Cardinals-elect to Rome to get their red hats won top honors. The churchmen flew in two *Constellations*—*Star of Paris* and *Star of Rome*—taking off from Chicago and New York. Archbishops Alphonsus Stritch and Edward Mooney boarded the big ships in Chicago. In New York, Archbishop John Joseph Glennon, 83-year-old dean of the American Archbishops, was joined by Archbishops Francis J. Spellman and Thomas Tien.

The departure of the churchmen from LaGuardia Field was a gala affair, attended by several thousand well-wishers including Mayor William J. O'Dwyer and Mrs. William Casey, wife of the Massachusetts Congressman, who christened the *Star of Rome*. It was blessed by Archbishop Glennon.

This marked the first flights in an airplane by Archbishops Glennon and Mooney. Archbishop Spellman is an old-timer when it comes to flying; in fact, he holds a pilot's license.

Accompanying the prelates taking off from New York were former Postmaster General James A. Farley; the Very Rev. Robert I. Gannon, president of Fordham University; and former Mayor Joseph J. McKee of New York. The *Star of Rome* carried 36 churchmen and laymen plus a crew of eight, and the *Star of Paris* 30 passengers and an eight-man crew.

ENTER the XF-12

LONG, slender, looking every inch the air speedster, the XF-12—military version of the Republic *Rainbow*, which will be the world's first 400-mile-an-hour passenger and cargo transport—took to the air for the first time officially on February 7 at Farmingdale, Long Island, New York. A few days previously Republic had staged a test flight for the big four-engined plane.

The XF-12, which is properly called a "photo reconnaissance giant," is the fastest long-range, four-engine, transport-type airplane in the world. Fifty-one tons, the XF-12 measures 129 feet and two inches from wing tip to wing tip. Its fuselage stretches to a length of 98 feet and nine inches; height to the stabilizer is 29 feet and 11 inches.

Republic Aviation Corporation secretly designed and built the plane according to Army specifications for long-range military reconnaissance missions never before attainable. It was developed specifically for the Air Technical Service Command.

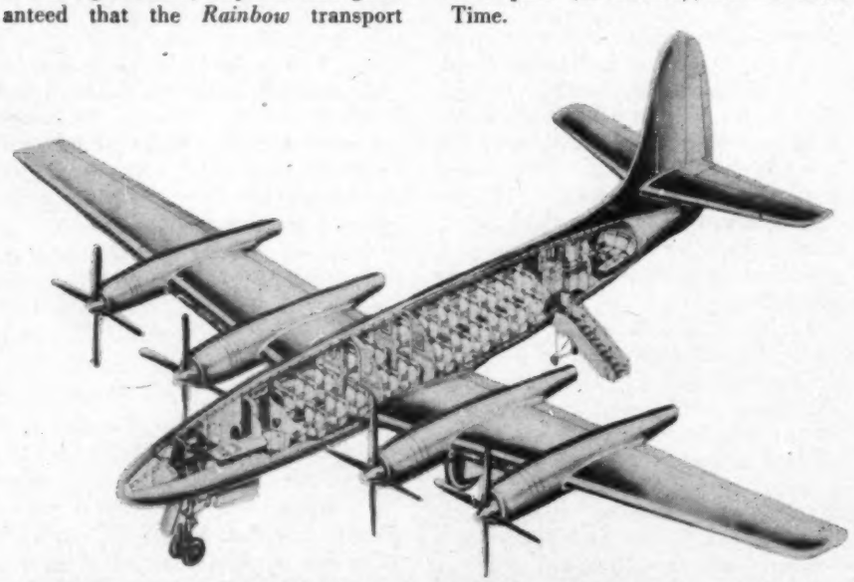
With changes in its power plant, the XF-12 is actually the forerunner of the *Rainbow*, which was introduced to the readers of AIR TRANSPORTATION last October.

"Performance figures on the XF-12 are still subject to military restrictions," Republic stated in a formal announcement. "However, it has become a matter of common knowledge that, in its airline agreements, Republic has guaranteed that the *Rainbow* transport (RC-2) will have a top speed of at least 450 miles per hour and will cruise at 400 miles per hour, at an altitude of 40,000 feet, over a range of more than 4,100 miles. This performance is with a normal gross load of 114,200 pounds, including 5,500 gallons of gasoline, 46 passengers, luggage, and a crew of seven."

TEST SUCCESSFUL—The Republic XF-12 winging over a hangar a few seconds after its initial take-off earlier this month. Forerunner of the Rainbow, 400-mile-an-hour transport plane to be, the XF-12 was ordered by the Army Air Forces for long-distance photo reconnaissance work.

Here are a dozen sidelights concerning the XF-12 and the *Rainbow:*

Taking into consideration the difference in time, a *Rainbow* transport leaving New York at 2:00 p.m. would be in San Francisco or Los Angeles at 5:30 p.m. (or earlier), Pacific Coast Time.



OUTSIDE LOOKING IN—Cutaway of the Republic Rainbow, showing its interior arrangements. Pan American World Airways is reported to have ordered 15 of these transports.

The four Wasp-Major engines develop sufficient horsepower to lift 198,000 tons one foot in one minute, or would power 60 of Republic's new four-place *Seabee* amphibians.

If the blueprints of the *Rainbow* were opened and laid on a floor, they would cover 128,000 square feet.

Each *Rainbow* contains approximately 10 miles of electrical wiring.

The amount of rubber required in the manufacture of each main landing gear tire is sufficient for two dozen automobile tires, size 600 x 16. Its diameter equals the height of an average man.

About 368 automobiles could receive full tanks of fuel from the cylindrical tank which holds the plane's total gasoline supply. Enough oil is carried to provide for complete changes for 163 ordinary automobiles.

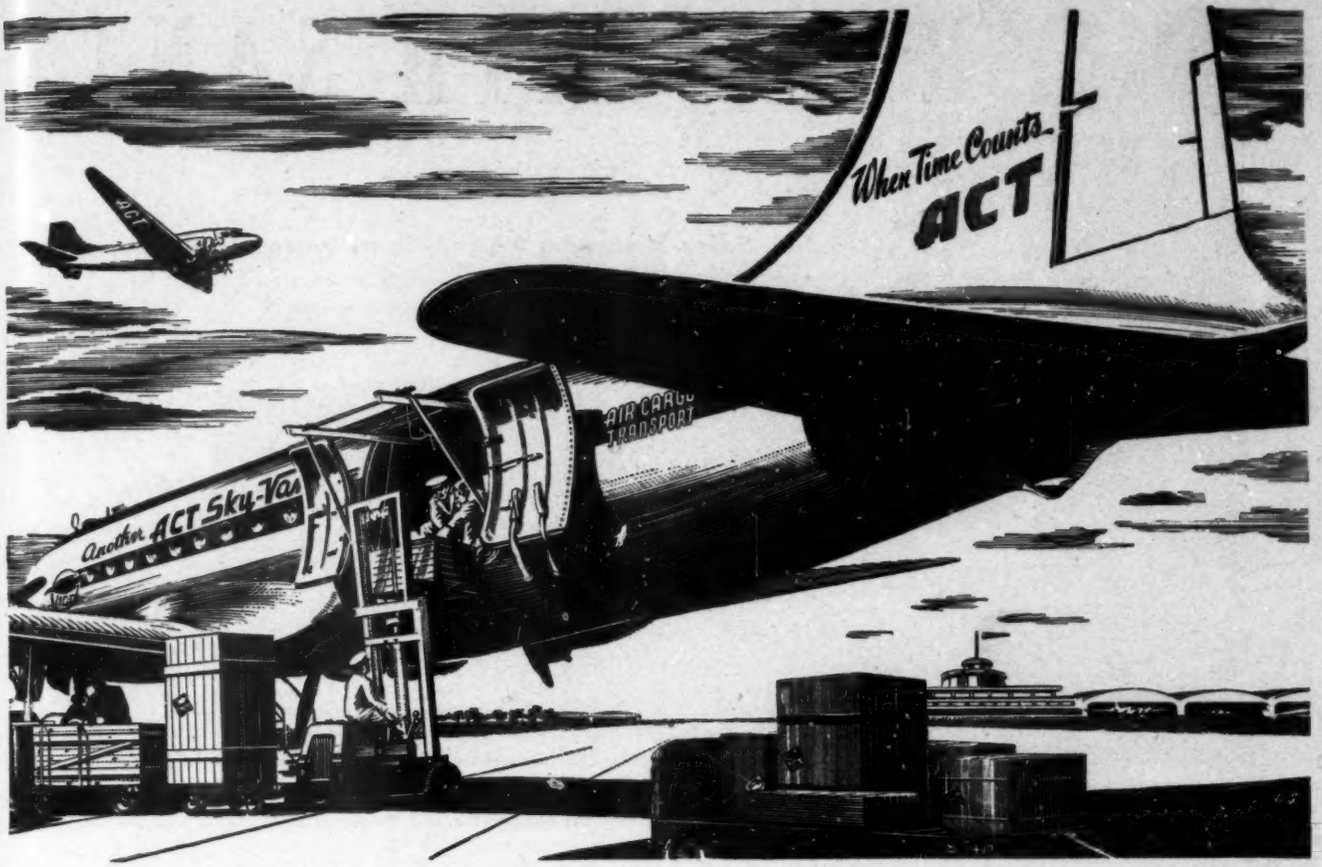
Speaking about fuel, the *Rainbow's* gasoline load could carry 30 average motor cars on a week's trip from New York to San Francisco. The plane, with full passenger and cargo load, can make the trip in some six hours.

The heating facilities are sufficient to heat an eight-room suburban home.

Then there are the propeller tips which extend to a height of two stories, and the tail which stands four stories high.

The six generators of the XF-12 develop enough power to illuminate 1,440 ordinary 25-watt bulbs continuously.

There are over 183 vacuum tubes in the XF-12's radio and radar equipment, not counting the Mae West radio and several other units.



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WHEN TIME COUNTS . . . ACT

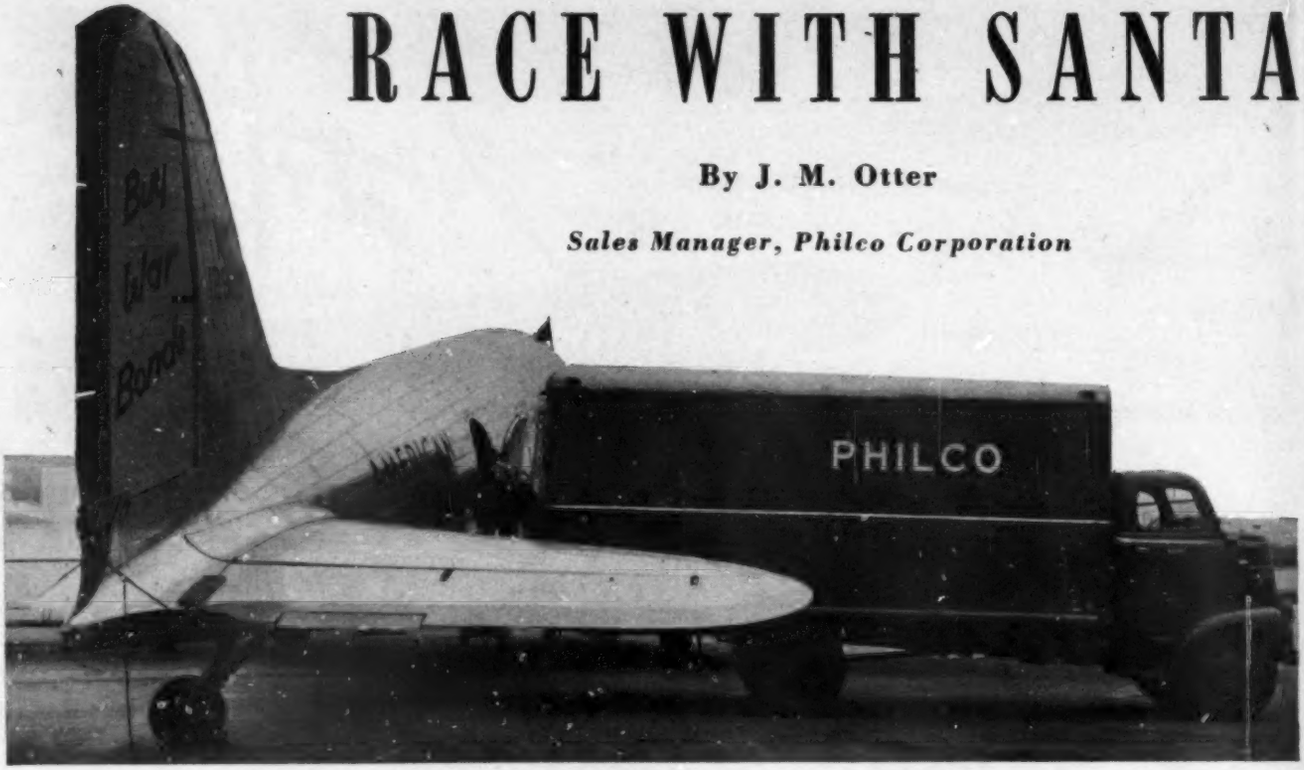
AIR CARGO TRANSPORT

CORPORATION EMPIRE STATE BLDG., N. Y. C.

RACE WITH SANTA

By J. M. Otter

Sales Manager, Philco Corporation



AMERICAN LENDS A HAND—An American Airlines Airfreighter cooperates in the task of getting radio sets in the hands of dealers in time to satisfy the peak Christmas buying rush.

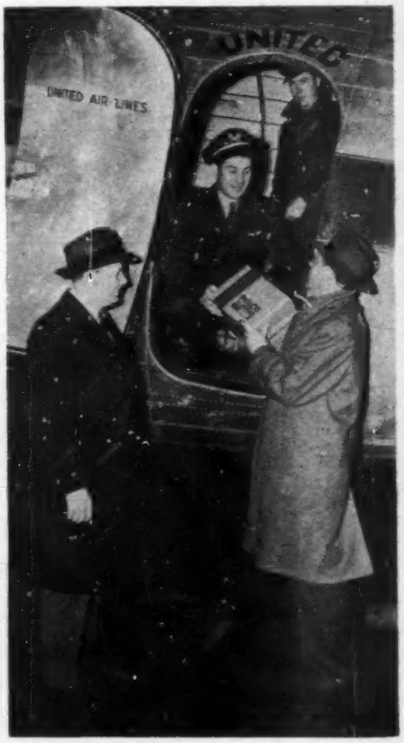
WITH a big helping hand from the air transportation industry Philco Corporation recently created another first by flying more than 15 tons of postwar radios for Christmas display to distributors and dealers in over 41 major cities.

It was Philco's desire that every dealer should receive a radio prior to Christmas as a herald for the shipments to come, now that the corporation has converted to mass civilian production. The answer to the problem of rapid transportation, required to meet the Christmas deadline, was found in the largest and first shipment of radios by chartered air freight since the conclusion of the war.

Five flights—three by National Skyway's *Conestogas*, one by United Air Lines and one by American Airlines—spanned the continent from East to West and North to South. Flights terminated at Portland, Oregon; Oklahoma City, Oklahoma; Wichita, Kansas; Memphis, Tennessee and San Francisco, with numerous stops en route to discharge radios for intermediate sections of the country. Despite some of the worst flying weather of a young Winter, all flights (the first starting December 10) arrived in time to beat the Christmas deadline.

The task of delivering the radios was assigned, rightfully, to a group of men who fought in the air during World War II that we might have a postwar world with the improvements it promises. National Skyway's flights were headed by Pilots Robert P. "Duke" Hedman, Joseph Rosbert and C. H. "Link" Laughlin. These men, as the

LOADING A CONESTOGA—A Flying Tiger Line cargoplane taking on a consignment of radios. A fleet of five planes representing three airlines delivered the Christmas sets to distributors in 41 major cities.



AIRBORNE RADIOS—Captain R. E. Parcell, of United Air Lines, receiving the last of over 750 Philco radios from J. H. Stickle, merchandising manager of the company's radio division. UAL's John C. O'Connor and crew member look on.

trade name Flying Tiger Line would intimate, all belonged to General Claire L. Chennault's famous group which flew fear into the Japs, before the United States entered the war, with the then not highly thought of P-40s.

Duke Hedman, third highest-ranking ace of the Flying Tigers, was personally decorated by Generalissimo Chiang Kai-shek. On his first mission he accounted for five Nips and later ran the total to eight. While actively engaging the enemy he was shot down twice.

Joe Rosbert accounted for seven *Zeros* and made a total of 301 missions. The last named pilot, Link Laughlin, also bagged seven Zeros and had the displeasure of spending 46 days in the jungle.

Pilots of the United and American planes saw action with the Army Air Corps on various fronts, but expressed satisfaction at having a load of radios in place of the so-called "eggs" with nothing to combat except the weather.

The five chartered flights started from Philadelphia with United flying the Western route—Denver, Salt Lake City, Spokane, Seattle and Portland. American took the Southern route stopping at El Paso, Phoenix, San Diego, Los Angeles, and San Francisco.

National Skyway covered the Eastern portion of the States with three flights. The first *Conestoga* covered Pittsburgh, Columbus, Cincinnati, Louisville, Indianapolis, St. Louis, Des Moines, Omaha, Kansas City and Wichita. The second ship landed its cargo of radios at Buffalo, Cleveland, Detroit, South Bend, Chicago, Milwaukee, Minneapolis, Peoria, Nashville and Memphis. Flight three traveled Dixie with stops at Richmond, Charlotte, Knoxville, Atlanta, Birmingham, New Orleans, Houston, San Antonio, Fort Worth-Dallas and Oklahoma City.

At each of the cities the plane was met by a Philco distributor who rushed the radios to the many dealers in that district.

This large-scale air shipment is an indication of the speed with which Philco has achieved mass production. Such production was started with the end of hostilities through the investment of $7,000,000 in a reconversion program designed to double the prewar output of radio receivers and refrigerators. The emphasis on speed gives hope that the quantity deliveries necessary to supply the public demand may not be long delayed.

Air Freight Study For Los Angeles Planned

The Board of Directors of the Los Angeles Chamber of Commerce has formally approved an invitation to the Edward S. Evans Transportation Research Foundation to make a study of potential air freight between Los Angeles and various cities of the East.

It is understood that the Los Angeles study will, in effect, complement the current study of the New York area which is expected to reach completion in mid-March. Colonel L. H. Brittin, research director of the Evans foundation, has been making his New York headquarters at the offices of the Aviation Section, New York Board of Trade. It is possible that the Los Angeles research job will begin in the middle of April.

The announcement was made by Glen B. Eastburn, manager of the Los Angeles Chamber's Transportation Department.

10,800 Eggs Are Flown to Czechs

A unique transatlantic air cargo left La Guardia Field when the American Overseas Airlines plane *Scandinavia* took off with 10,800 fertile eggs. The eggs, packed in 30 crates and weighing 1,800 pounds, were sent to Czechoslovakia via Stockholm by UNRRA. They represented the first of a total of 66,000 pounds of fertile eggs scheduled for that country to replenish its badly depleted poultry population.

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Florida's Agricultural Perishables *and* AIR FREIGHT POTENTIALS

This article is based on an exhaustive survey compiled by Dr. R. W. Hoecker, agricultural economist for the Bureau of Economics, United States Department of Agriculture, and Colonel L. H. Brittin, director of the Edward S. Evans Transportation Research. Collaborating with Dr. Hoecker and Colonel Brittin were Dr. C. V. Noble, agricultural economist and head of the Department of Agriculture Economics, and A. H. Spurlock, associate agricultural economist, Agricultural Experiment Stations, College of Agriculture, University of Florida.

●

A VERY substantial part of the winter and spring supply of fruits and vegetables for the Northeastern United States originates in Florida. Normally this is transported by rail, truck, and boat. Before the war affected transportation, about three days were required to transport fruits and vegetables by refrigerator car or truck from Miami to New York City.

If, in the future, air transportation is used, only about eight hours would be needed for this transport. The commodities could be harvested in the morning, precooled and packed in the afternoon, transported to New York City overnight, and sold in retail stores the next day — only 24 hours after harvesting.

Important factors in the successful movement of agricultural perishables by air freight are the supply of products, their areas of production, and their seasonality of production. Other factors, such as relative net costs of air shipment and competing transportation, the price of the commodity relative to its weight and volume, and the extent of the increase in the demand for the products that will be caused by air transportation, also are important in determining the quantity of agricultural commodities which may move as air cargo.

Dr. R. W. Hoecker

Costs Versus Reactions

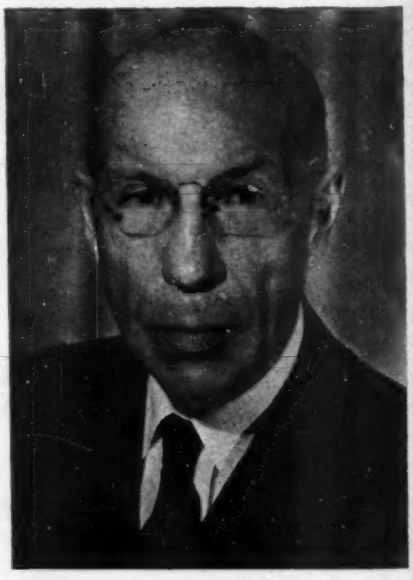
Costs of transportation and consumer reaction evidently should be analyzed on a commodity basis. This has been done for strawberries and tomatoes transported from Florida to Detroit and for lettuce from California to Detroit.

Research on strawberries, tomatoes, and lettuce has indicated that air transport offers shippers of many perishables certain economies partially or wholly offsetting the higher cost of transportation. Substantial savings could be made by the use of lighter containers, exclusion of ice, and the elimination of some packing costs. The estimated differential in transportation cost of airborne strawberries and surface-borne strawberries from Florida to Detroit could be reduced by one cent per quart, or from 6½ cents to 5½ cents per quart, by using in the airborne cargoes lighter containers than the standard wooden crates now in use.

The estimated transportation cost differential between airborne and surface-borne tomatoes of about six cents per pound could be practically offset by savings in ripening costs and packaging for vine-ripened tomatoes shipped by air. The estimated cost differential in transporting lettuce from California to Detroit which is 6½ cents per pound could be reduced to about 3¾ cents per pound by savings which could be obtained by using lighter packages, less waste through quick transport, and by packaging the lettuce in the field instead of in packing sheds.

Conclusions drawn from these previous studies are that even with the lowest ton-mile costs which are likely to prevail for some time and with utmost economies in handling, most air-transported produce must be sold at premium prices. In order to compete successfully with surfaceborne produce the airborne produce must be of superior quality. Apparently substantial quantities of airborne strawberries would sell readily for 5½ cents per quart higher than surface-transported strawberries during the months when the retail price is 35 cents or more per quart.

Almost all of or even substantially more than the tomatoes now moving by surface carriers probably would move by air if vine-ripened, airborne tomatoes could be sold at retail at the same price as surfaceborne green-packed tomatoes. Lettuce from California has been transported by plane and placed on sale in Detroit at a price differential of five cents per head in competition with



Colonel L. H. Brittin

surfaceborne lettuce, with all factors in the sale of the lettuce held constant except the price. About an equal quantity of airborne lettuce at the higher price as surfaceborne lettuce at the lower price was sold.

The detailed analyses of the air transportation of strawberries, tomatoes, and lettuce suggest an effective approach to the study of the air transportation of most other agricultural perishables. These studies demonstrate that although air transportation costs probably will be higher than surface transportation costs, there are often offsetting economies in shipping produce by air and an offsetting factor in the superior quality of the airborne produce which makes it salable to consumers at a higher price.

This report presents statistics on the seasonal production of fruits and vegetables in Florida and shows how air operations might fit into the production pattern. It suggests potential supply of agricultural perishables from Florida if demand arises. Relatively little critical analysis has been made of the likelihood of any single commodity being transported by air. A study was not made of the changes in production and harvesting practices which might be necessary to produce perishables especially suitable for air transportation. For example, Florida tomato growers indicate that there would be considerable difficulty in producing vine-ripened fruit unless the plants were staked. At present this is not practiced in many of the commercial production areas.

FROM PLANE TO TRUCK — A cargo of fruit and vegetables, flown from a distant city, taken on by a truck for direct delivery to store. The survey shows that a substantial portion of Florida's crop of perishable agricultural products can be moved by air.

Florida shipped about 650,000 tons of 30 different kinds of vegetables during the 1942-43 season. Small quantities of snap beans, cucumbers, squash, peppers, and lima beans are harvested

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as early as October. The harvesting season for vegetables extend from October through July.

Many vegetables that are grown and shipped by rail from Florida would not be suitable for air transportation. Commodities such as watermelons, field peas, squash, mustard, turnips, and onions probably will not move by air, except for first early shipments, unless airfreight rates are lowered to about the level of rail freight rates. At present, first shipments usually move by railexpress and extend the product's marketing season by this early arrival on the markets. Air shipments may further advance the season by two or three days.

Sure Candidates

Commodities such as tomatoes, strawberries, sweet corn, limabeans, spinach, lettuce, cauliflower, and English peas will probably prove to be among the most profitable vegetables which can be shipped by air freight. Research has shown that tomatoes, strawberries, and lettuce probably will be profitable when so shipped. Bulky fresh staple products that can be processed or concentrated in the producing area may move in relatively large quantities even at relatively high airfreight costs. Products in this category are peas and lima beans shelled before shipment and spinach and cauliflower cleaned, washed, and packed ready to cook. Sweet corn is highly perishable and can seldom be transported very far from the producing area under ordinary transport conditions. But it is a likely product for air transportation; in addition sweet corn is produced at the beginning and at the end of the Florida season for shipping perishables. Thus it would extend the time of air operations. All in all, a large tonnage of vegetables probably would be available for air shipment in the months of November to June, inclusive.

Florida's production of citrus fruits is many times larger than its production of vegetables and other fruits. Some citrus fruits are harvested in Florida during all months of the year, the greatest quantities coming in December, January, February, March, and April.

Citrus fruits are being transported successfully by rail and little benefit would be secured from the more rapid air transportation. It is possible that a relatively small proportion of the crop could be moved by air by the shipment of fresh juice extracted and concentrated in the producing area. Orange, tangerine, and lime juice are highly perishable when not processed and would benefit by rapid transportation. By concentrating the fruit into the juice the economic significance of the difference between rail rates and air rates would be lessened. Members of the Texas Citrus and Vegetable Growers and Shippers are considering the installation, near airports, of processing and chilling plants to extract the juice from oranges and possibly from grapefruit for shipment by air transport. The juice in paper containers might move overnight to northern metropolitan centers for doorstep delivery, possibly in conjunction with milk deliveries.

The total tonnage of gladiolus, succulents, and fruits (other than citrus and strawberries) has been relatively small. However, much of this tonnage is harvested during the months when the vegetable crops are not being harvested. Seasonal production of fruits, gladiolus, and succulents is shown in the table. Most of the products listed probably will move successfully by air. At present, one of the limiting factors in the production of these products for marketing is the lack of rapid transportation. Production of many of them will presumably be increased when shipment by plane is available.

SUCCULENTS

- Aloe—agave (century plant)
- Chinese evergreen
  - Diffenbachia
  - Dracena
  - Nepthytis
  - Philodendron
  - Cryptanthus
  - Syngonium
- Peperomia
- Pandanus
- Sansevieria
- Ardesia
- Crassula
- Cacti
- Crown of thorns (Euphorbia splendens)
- Pothos
- Crotons
- Rubber plants (Ficus elastica)
- Air plant leaves
- Ferns
- Azaleas in bloom
- Fancy leaf caladiums
- Saint paulia (African violet)
- Phoenix roebelenii
- Aspidistra
- Self branching and miniature ivy

Air Freight Rates

Many other flowers are produced and shipped from Florida but the statistics are not available. If air freight service at relatively low rates is established, a tremendous increase in the flower business of Florida may materialize. Some expensive flowers, such as orchids, carnations, and lilies, have moved at the present high air express rates.

Some of the flowers which may be among the first to move in quantity by air are chrysanthemums, asters, gladioli, camellias, orchids, roses, carnations, and gardenias. Many of these flowers can be grown in the open in Florida whereas in the northern competitive regions most of them must be grown under glass. The lower production costs and generally superior quality of the flowers may put Florida growers in a favorable competitive position in relation to northern and eastern greenhouses. Flowers are bulky and relatively light, but with a cargo of flowers it is possible to reach the weight limit of a DC-3 plane before the cubic space available for loading is used entirely. This indicates that density is not a very

(*Continued on Page* 50)

AIRBORNE TOMATOES—Colonel L. H. Brittin (right) examining a package of tomatoes flown several thousand miles in an American Airlines Airfreighter. At left is Glenn Mather of the Container Company

1-20-46, FLASH! UNITED BUYS FLEET OF MARTIN TWIN-ENGINED TRANSPORTS!

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WAGING THE PEACE AND A

By DR. J. PARKER VA

Director of Aviation Research, The

IN these fast-moving days it may be helpful to recall that old saying: "It's not what you don't know that hurts you; it's what you knows for sure that ain't so." So many things we knew "for sure" a few years ago are no longer so. Take our ideas about world geography, for instance:

On New Year's Eve I ran into an old friend of mine at the Army and Navy Club in Washington. The last time I had heard from him he was in Tokyo, on General MacArthur's staff.

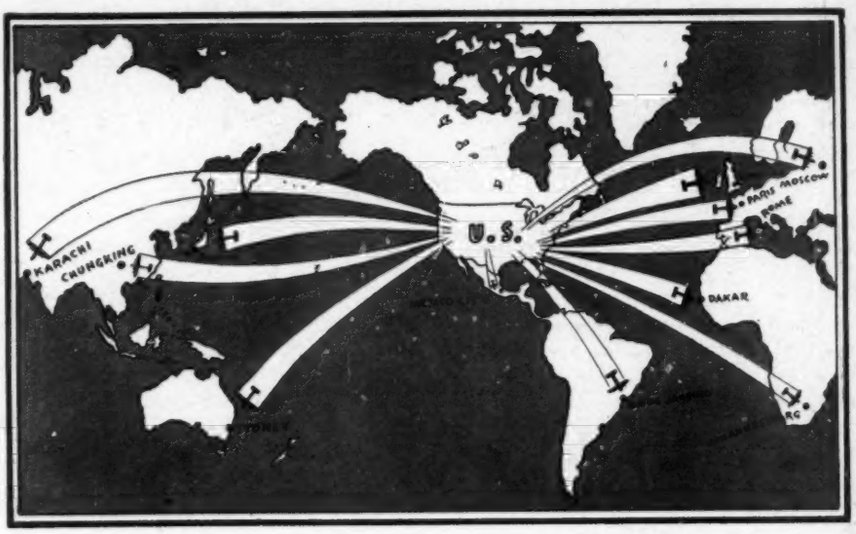
"Why, Colonel," I exclaimed, "I thought you were on the other side of the Pacific!"

"So I was," he replied—"three days ago."

In less than three days he had come on a routine Army flight via Marcus, Wake and Johnston Islands—those tiny coral atolls in mid-Pacific which most of us had never heard of a short time ago; then Honolulu, San Francisco, and Topeka—only six intermediate stops between Tokyo and Washington.

Such a trip, however, is not unusual today. Many of you can match it in your own experience, or in that of your immediate family or friends. Last year, before the end of the war, our ferry pilots were delivering planes from the United States to India in three days, and returning to this country in the same week. Last summer the Air Transport Command was flying over a thousand trips a week across the Atlantic.

Many a young man whose home is in Nebraska or in Iowa, is almost as well acquainted with Khartoum on the Upper Nile or Belem at the mouth of the Amazon, as he is with Omaha. In China, planes are now a familiar sight to millions of Chinese who have never seen a locomotive or an automobile. The Chinese had no word in their language for "airplane," so they described it as "a ricksha in the heaven that goes without a coolie." Translated into pidgin English this became: "topside ricksha coolie no have-got."



For the immediate postwar future, what do we see in the international air transport picture? It is safe to predict that before the end of this decade—that is, by December, 1949—the major cities of the world will be connected by a network of trunk air routes over which daily flights will be operating at speeds in the neighborhood of 300 miles an hour.

It requires no prophetic insight to foresee schedules of 300 miles an hour or more. Transport planes are already flying, or soon will fly, which approach or exceed this speed: the Boeing commercial transport, developed from the B-29 bomber, or the Douglas *Mixmaster*, both of which have recently flown across the continent in about six hours, the Lockheed *Constellation*, in which TWA flew some 35 passengers from Washington to Paris in 12½ hours a few weeks ago; Republic's new *Rainbow*, which is scheduled to fly next year and is expected to cruise around 400 miles an hour; and others.

Now, consider what daily schedules criss-crossing the globe at average speeds of 300 miles an hour will do to this world of ours: It means, for example, that you will be able to leave the capital of the United States after lunch one day and have breakfast the following morning *in the capital of any country in Europe or Latin America:* in Paris or in Rio de Janeiro; in Moscow or in Santiago; in Athens or in La Paz.

This is the measure of our world of the next 10 years—between lunch and breakfast; the world to which you and I have to adjust our thinking; the world your son or your daughter, if they are starting in high school about now, will grow up with during their school years.

As startling as this may seem, however, it is only a foretaste of what will follow: By the time those children of yours graduate from college, velocities *above the speed of sound* will have begun to come into commercial use. An even more *fantastic shrinkage* of the world will then take place.

A few weeks ago, at the Wilbur Wright Memorial Lecture, it was my privilege to hear the distinguished British jet propulsion expert, Dr. Roxbee-Cox, describe what scientists see in store for us two or three decades from now. There are no physical laws, he

ND AIR TRANSPORTATION

PARKER VAN ZANDT

...search, The Brookings Institution

What is the measure of our world during the next decade? The author has an apt but startling phrase for it—"between lunch and breakfast." But think hard and you'll see it's true . . . for it's lunch at home this afternoon and your morning eggs thousands of miles away tomorrow.

said, now known that place any ultimate limit on the speed planes may eventually attain. In research wind tunnels here and abroad supersonic speeds up to 2,000 miles an hour are already being explored. That is well over twice as fast as the earth revolves in these latitudes. Sooner or later, in a few decades at most, *we will be able to travel faster than the sun travels overhead!*

The limiting factor in future practicable speeds, says Dr. Cox, may prove to be the human digestive system. The problem, he said, is basically a gastronomic one. Project yourself for the moment into the year 1976: Suppose you have just finished lunch in Paris and then you step into a rocket plane bound for, say, Chicago. You will arrive in Chicago before the lunch hour, *Chicago* time; and, added Dr. Cox, "it is going to be frightfully hard, you know, on the human digestive system, eating two lunches the same day."

There is no escaping the hard fact that the prewar world of *my* generation is obsolete. That does not mean, unfortunately, that the new world will necessarily be *better*. All we can say "for sure" is that it will be *different*. Certainly, aviation is making the world into a neighborhood; but making people closer neighbors does not automatically make them friends. It may lead, in fact, to far more violent world quarrels than the one we have just been through.

To suppose that this country, for example, can keep the secret of atomic bomb production indefinitely is to put our heads in the sand. As Norman Cousins has said, we were not the only horse in the atomic derby; we just happened to finish first. The others will be along in due time.

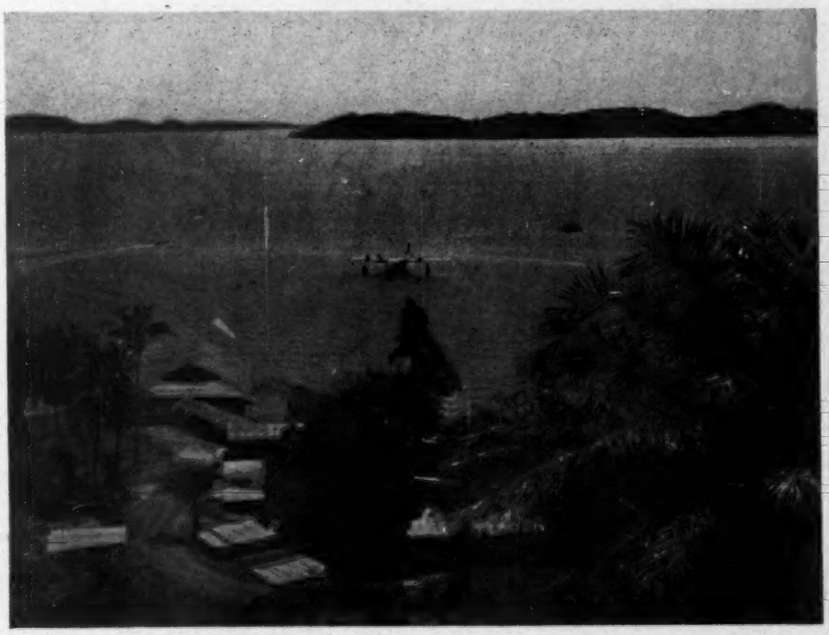
In an increasingly suspicious and hostile international atmosphere, life in the future could well become intolerable. Omaha would be no safer than New York or San Francisco. Indeed, Omaha is actually closer to part of Europe and Asia than are many of our cities on the Atlantic and Pacific Coasts.

An enemy country could have rockets carrying atomic weapons trained on Washington, on Chicago, on every vital center in America, awaiting only the pressure of a button to set them off. It would be like living with a gun pointed always at our head. Sooner or later some future Hitler or Perón would find an excuse to pull the fatal trigger.

Few problems in the world are as fundamentally important to everyone of us as the problem of maintaining world peace. How this problem is to be solved will determine, directly or indirectly, the amount of taxes we have to pay, the business we do, and our chances of dying in a future atomic war. The world, for the first time in history, has been reduced to manageable size; and that means that, sooner or later, by orderly process or by violence, someone will manage it—*either a world democracy or a world dictator.*

Now, it seems to me that just as air transportation has helped to *create* this problem, it can also help to solve it. World organization, if it is to be ef-

CONGO LANDING—A BOAC flying boat after landing on the Congo River in Africa. Not so long ago months away from your home, the Congo can be reached today in a matter of hours.



fective, must be preceded by world understanding. Otherwise, at the best it can only be a roof over chaos; and at the worst, tyranny.

An indispensable preliminary to the establishment of an international legal order is the development of what Walter Lippmann has called a "common law of the world." Just as a city police force works only because the citizens are in general agreement as to the laws to be enforced, so a law-abiding *world* community will work only when there is widespread understanding and agreement among the governed. This essential preliminary to the maintenance of peace by law—to the formation of a world state—has not been sufficiently emphasized, I believe, in such otherwise admirable books as Emery Reves' *The Anatomy of Peace,* or Clarence Streit's *Union Now.*

If people are to be prepared for world citizenship, they must visit the laboratory of the world in far greater numbers than ever before, and learn first-hand about other people's problems. This is air transport's great opportunity, as well as its responsibility, to help create the climate of peace.

In my book, *Civil Aviation and Peace,* I have suggested, as some of you may recall, that "a three-cent fare to anywhere should be air transport's goal." (*See November, 1944, issue of* AIR TRANSPORTATION.) At such a rate the *round* trip from Omaha to London and return, for example, would cost about $250. Recent careful surveys have shown that with rates at approximately this level, and *no place on earth over two days away,* an enormous overseas travel would develop. Such travel would foster trade, create jobs, and contribute to domestic prosperity in every participating country. From this new channel of commerce, undreamed-of streams of development would flow.

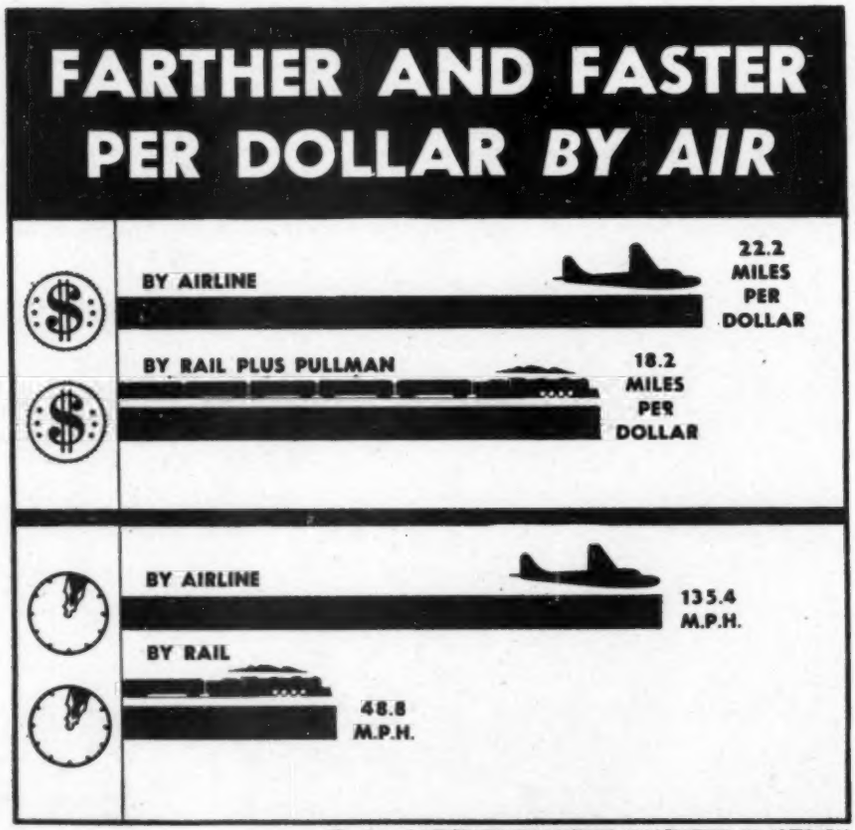
IN THE SHEPHEARD—TWA's ticket office in the famous Shepheard Hotel, Cairo, Egypt —a dash of United States in the East. Dr. Van Zandt points out that air transport has the opportunity as well as the responsibility of helping to "create the climate of peace."

Mass air travel would help, for intance, to offset the dollar shortage abroad, so that foreigners could buy more of our goods and services. Dollars spent abroad in effect never leave home. To buy a meal or pay a hotel bill in Paris or Peru you need francs or pesos in normal times, not dollars. Dollars used to purchase local currency come back to us when foreign customers buy our industrial machines, our durable goods, or other products, or pay interest on the billions of dollars we are being asked to lend abroad.

A good way to make sure that debtor countries have dollars on hand to pay the interest on our loans when it falls due is to make it easy for you and me —and millions like us—to fly down to Rio, see the Acropolis, visit Victoria Falls, the Taj Mahal, Peiping, Baghdad, and all the other fascinating places of the world. Can you think of any pleasanter way of collecting interest on a loan?

Mass air travel of this character would stimulate the development of backward areas. It would help to stabilize international economic relations, and thus put a floor under peace. It would create a climate conducive to international understanding. In time it would transform the world.

How soon we can hope to have an average fare of three cents a passenger mile on a self-supporting basis is difficult to say. So many factors are involved. It depends, in part, on the



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economies which may prove to be possible with operations on such a mass scale; on technological improvements already on the way; on future intensive research; and, to an important extent, on Federal policy.

That a three-cent level of fares on a self-supporting basis can be reached in due time by progressive stages, appears incontestable. The question is whether, in the interest of advancing world understanding and trade, it may not be desirable to adopt a policy of Federal aid which will hasten achieving a three-cent-a-mile goal in the shortest possible time. The by-products of such a policy will contribute directly to national security, as it will help to assure a healthy aircraft manufacturing industry, a reservoir of skilled aviation personnel, and a nation of air-minded citizens. Such temporary aid would also be a small premium to pay as insurance against future aggression.

The disposal of surplus property abroad may seem a far cry from what we are discussing. Yet it offers a promising way to stimulate international understanding. We own outside the borders of our country some 10 billion dollars' worth of surplus property, scattered throughout the world. Much of it will have to be sold or otherwise disposed of on the spot. A substantial part, perhaps several billion dollars' worth, could be used locally for postwar civilian purposes by foreign governments and citizens. Yet they can purchase it only by using their own currency, since they are short of United States dollar exchange.

It would be entirely feasible for our Government to accept payment for this surplus property abroad in the local currency, to the extent necessary, and then to stimulate international travel by making the money available, at attractive tourist rates, when we go abroad. A similar plan for stimulating travel, you recall, was used by a number of countries before the war. Right now the Treasury Department is puzzling over the problem of what to accept for money when offering for sale our surplus property abroad.

Another plan which might be given a trial while waiting for air fares to reach the level of the average pocketbook, is a program of *Air Travel Fellowships*. Such a program should be directed particularly toward teachers and others of relatively modest incomes, who are in a position to influence large numbers of people.

Suppose committees of educators and other leading citizens were set up in each state to select a certain quota annually of such Air Travel Fellows. This selection ought to be based on character and other qualifications, somewhat as Rhodes Scholars have been chosen in the past; and also on competitive examinations covering the background, culture, and languages of the countries which the applicant desires to visit. Similarly, teachers in foreign lands would be chosen as Air Travel Fellows so that they might visit the United States and learn first-hand the American point of view.

All well and good, I can imagine some of my readers saying: "But what are you going to use for money?" Well. here is an idea that might be considered: In normal times, an airline rarely operates with 100 percent full loads. When a plane takes off, three or four seats out of every 10 still remain unsold on the average. This may be hard to believe right now with transportation at its present peak; nevertheless, it is a normal condition which every traffic man will understand. The number of unsold seats varies greatly, of course, from flight to flight and from season to season. In rush periods it will be less, and in slack hours or seasons, more. *On the average*, however, throughout the year, we can normally expect some 15 seats unsold in a 50-passenger plane.

Now, suppose arrangements could be made for the winners of Air Travel Fellowships to occupy a portion of these unsold accommodations — on a when-and-as-available basis, to be sure—at some purely nominal rate. On this basis a teacher from Philadelphia, or Sioux City, or Red Oak, winning an Air Travel Fellowship could hitch-hike his way abroad and spend six to eight weeks of purposeful study and travel in a number of foreign lands, at a total cost of a few hundred dollars. What teacher worth his or her salt could not beg, borrow, or wangle a few hundred dollars for such a privilege!

The cumulative effect of several thousand of these Fellows returning each year to their schools and classrooms would be tremendous. In a relatively few years they would reach and influence millions of youth. In the aggregate, they would do much to weed out the intolerance, prejudice and ignorance that constitute such an obstacle to world understanding today.

Peace is more than the absence of fighting; it is a manner of living together. The waging of peace calls for a program of positive action. It will be the tragedy of our times if history records that the mantle of world leadership has fallen on us—the most powerful nation on earth—before we are ready, mentally and spiritually, to receive it. We need to remind ourselves of the words of that great American, Theodore Roosevelt:

"We have no choice, we people of the United States, as to whether or not we shall play a great part in the world. That has been determined for us by fate, by the march of events. We have to play that part. All we can decide is whether we shall play it well, *or ill."*

The Author

DR. J. PARKER VAN ZANDT has been active in both the domestic and international aviation field for over two decades. He is a pilot with several thousand flying hours.

During the First World War he served for a time as a volunteer in the French Army before the arrival of American troops in Europe. While an officer in the U. S. Air Corps, he pioneered in blind flying and organized the Air Navigation Branch of the Air Corps Engineering Division at Dayton, Ohio. He has served as an officer of various airlines, as European aviation representative for the Ford Motor Company, and as general representative for Pan American Airways in the Pacific area during the development of the Pacific airline.

From 1939 to 1941 he was consultant to the Civil Aeronautics Board. After a year in South America for the Government in connection with the elimination of Axis aviation activities there, he returned to Washington and organized the Office of Air Transport Information in the Department of Commerce.

Since July, 1943, he has been Director of Aviation Research with the Brookings Institution, an internationally known research organization devoted to public service through research and training in economics and the social sciences.

ATA Appoints McGoldrick To Study U.S. Airports

Employment of Joseph D. McGoldrick, for 12 years Comptroller of the City of New York and a leader in the development of Idlewild Airport, to head up a study of airport terminal facilities in typical cities in order to determine the feasibility of joint airline ground operations, has been announced by the Air Transport Association of America. The overall object, it was explained, would be to achieve economies in airline ground operations and provide better service for the public.

Among the services to be studied, with the view to the establishment of joint facilities, are those affecting the loading, unloading and handling of passengers, baggage, mail and cargo, lounges and restrooms, cleaning services, public address and intercommunication systems, information service, towing, fueling and cleaning planes, incidental maintenance, heating of hangars, etc.

Typical American cities with airport terminal facilities, affording a variety of size and complexity of operation, will be selected for the survey by Mr. McGoldrick. Twelve cities are under consideration and will figure, to some extent, in the studies, while from three to five will be chosen for the most intensive study.

The 12 cities listed at present are: Albuquerque; Boston; Chicago; Dallas; Denver; Detroit; Kansas City; Memphis, Miami; Peoria; San Francisco; Tulsa.

Point Won by Panagra In U.S. Court Ruling

The United States Circuit Court of Appeals has ruled that the Civil Aeronautics Board has authority to extend the route of Panagra from the Canal Zone to continental United States under certain conditions.

These conditions are that (1) if it determines that Pan American Airways, which own 50 percent of Panagra stock, nominates four of Panagra's eight directors; (2) if it is pursuing its own rather than the joint interests of Panagra; and (3) if it was engaging in unfair trade practises in preventing Panagra from filing an application for the extension.

The decision came after a 4½-year effort by W. R. Grace and Company, half-owner of Panagra, to bring the airline's planes to the United States.

Commonwealth Buys Columbia Aircraft

Commonwealth Aircraft, Inc., has announced the purchase of the Columbia Aircraft Corporation at Valley Stream, Long Island, New York.

The expanded operations of Commonwealth, whose general offices are in New York, will allow the company to increase its activity in both the commercial and military fields. Columbia's present contract for the XJL amphibian will continue under the new management which is headed by Raymond Voyes, president of Commonwealth. During the war Commonwealth produced nearly $41,000,000 worth of cargo and troop carrying gliders.

Sales of U.S. Planes To Spain is Defended

The State Department's approval of the sale of 19 surplus United States Army transport planes to the Iberian Airline of Spain was defended by Acting Secretary of State Dean Acheson as purely a commercial matter without political implications.

Critics of the deal pointed out Spain's pro-Axis attitude throughout the recent war. It was also stressed that Generalissimo Franco, dictator of the country, is one of the principal stockholders in Iberian Airlines.

The aircraft purchased by Iberian are described as C-47s.

KLM

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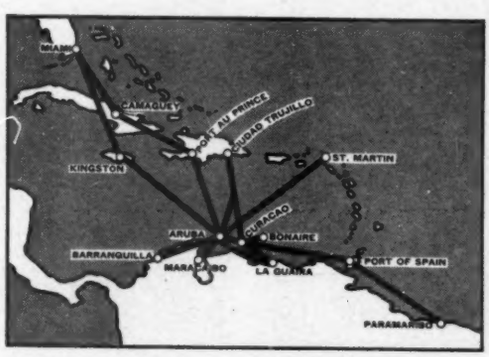

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SOUTHERNAIRE COMES INTO THE LIMELIGHT

Southern Aircraft Corporation's new business airplane—a twin-engined six-seater, carrying 200 pounds of baggage, and sporting the name, *Southernaire*—is now ready for a tour of the United States, touching at major cities in response to inquiries about the new aircraft. According to reports, the *Southernaire* will be in full production within two months.

The interior of the new plane includes reclining chairs for passenger comfort, two desks, two-way radio, complete instrument panel in the passenger compartment, thermos carafes, and other appointments found in a modern office. The *Southernaire* has a top speed of 202.5 miles per hour at sea level, with a cruising speed of 175.5 miles per hour at 65 percent of power. Its cruising radius is 760 miles.

Amended Certificate for Transatlantic Operations is Asked by Pan American

Pan American World Airways has asked the Civil Aeronautics Board to amend its certificate for transatlantic operation which now confines it to single bases in Eire, the United Kingdom, Portugal, and France. The company asserts that these are the four countries "to which it had been initially certificated—whereas in each of these cases a competitor has been authorized to serve substantially the entire country."

In its statement to the CAB, the airline points out that "the very existence of Pan American's Atlantic Division as an important and vigorous commercial entity is at stake," and asks that it be permitted to engage in competition with other certificated American overseas operators on effective terms.

Pan American is seeking authority to operate over the direct 564-mile route from Shannon, Eire, to Paris, instead of being compelled to fly its Paris-bound passengers over the long route via Lisbon and Marseilles, which is about 1,000 miles longer. It is pointed out that to confine Pan American to Marseilles while TWA is permitted to serve Paris and every other point in France would deprive Pan American of any substantial share of traffic to France and would make its permanent certificate to France a burden.

When Pan American inaugurated its service to France seven years ago, Marseilles was the only port in that country available to accommodate PAA's large flying boats. The company declares that it had been well advanced on a program for large four-engine landplanes, and expected to place these into service to Paris as soon as they were delivered. The Neutrality Act and the war prevented establishment of landplane service to the French capital city and other traffic centers.

The situation in Eire is not dissimilar to that in France, according to the statement, which claims that "to allow another carrier to serve all of Eire, including the great traffic center of Dublin, while Pan American is confined to a point on the West Coast would constitute an injustice of the most serious character."

It is pointed out that, in addition to London, there are several areas in the United Kingdom important enough to warrant direct American Flag service. These areas include Northern Ireland, to be served through Belfast, Glasgow, the Midlands, and Manchester. PAA states that it is pinpointed to Hurn, airport for London, while American Airlines is permitted to serve the entire country.

In Spain, Barcelona is the point assigned to Pan American, while, the CAB was told, Madrid is of paramount importance in the international air pattern of that country. TWA is allowed to serve Spain's capital city and every other point except Barcelona.

Pan American also wants to serve the Middle East and India via Italy and Greece, where operating rights are procurable, instead of being forced to await the obtaining of such rights in the Balkans, "which do not seem to be in prospect." In petitioning for authority to operate that service, Pan American stresses, that because of the situation in the Balkans, it cannot proceed over its certificated route beyond Vienna and therefore is prevented from operating to the Near East and India. As a result TWA alone would be able to afford service beyond Central Europe.

Service to the Near East and India, says PAA, would enable it to connect with its transpacific services and thereby provide an American Flag round-the-world airline. In addition, Pan American has asked authorization to serve Frankfurt, Germany, "as we believe the Board actually intended although Frankfurt turned out to be seven miles north of the 50th Parallel which was made the dividing line in Germany between American Airlines and Pan American."

Air Express Office Opened In Hawaii by Pan American

A new modern *Clipper* express office to expedite the efficient handling of Hawaii air express shipments to and from the mainland of the United States as well as to other parts of the Pacific Ocean area has been opened in Honolulu by Pan American World Airways. The new facilities are designed to meet the requirements of mass air shipments. In the near future, PAA intends to institute large landplane *Clippers* which will bring the islands within 10 to 11 hours of the mainland.

ANA Gets First DC-4 Ordered from Douglas By Foreign Airlines

Douglas Aircraft Company made its first postwar delivery to a foreign customer last month when it turned over a four-engine DC-4 to a representative of the Australian National Airways. It was promptly christened by the blonde Australian-born actress, Ann Richards.

This was the first of 65 new Douglas transports going to the airlines of 13 different nations. In dollar volume, the 65 transports totaled $22,119,400.

The biggest order goes to the French Government which will receive 15 DC-4s and four DC-3s. These transports will be used on the 70,000 miles of airways flown by Air France throughout France and the French Colonial Empire. The second largest order goes to ANA: four DC-4s, and an equal number of DC-6s. SILA, the great Swedish airline, is waiting for delivery of a half-dozen DC-4s; and DDL, the Danish airline, has purchased two. The two Scandinavian airlines will co-operate in giving air service between Stockholm, Copenhagen, Paris, London, and New York.

Other purchasers of Douglas transports were: Sabena, Belgium; KLM, Netherlands; KNILM, Netherlands East Indies; Iberia, Spain; Norwegian Air Transport, Norway; NAB, Brazil; Aer Lingus, Eire; Swissair, Switzerland; and the South African Government.

RIGHT ON THE NOSE—Beauteous Ann Richards, Australian-born Hollywood star, christening a Douglas DC-4 purchased by Australian National Airways. Foreign airlines have ordered 65 Douglas transports.

AIRDOM

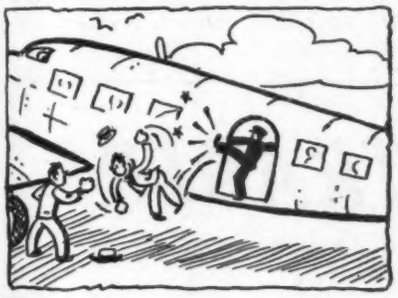
By Richard Malkin

Trade Mark

STORIES THEY TELL YOU

BACK in the days B. S. (Before Stewardesses), a National Airlines plane at Tampa waited to take on two additional passengers—innocent-looking chaps who expressed a desire to fly to Jacksonville. But the gentlemen's air of innocuousness had not been matched by deed, for the pair were a bit in their cups. Although, to all outward appearances, they could have passed for charter members of the Anti-Saloon League, the truth of the matter was that the turbulent bottled spirits had created an aggressive ugliness in the two.

No sooner did the plane take off, than the two rose to their feet, squared off like Sullivan and Corbett, and went to it with such zest that the pilot, unprotected by the now universal partition, was himself in great danger of being buffeted about.



The pilot was in no mood for aerial fisticuffs (even if he wasn't a party to it) and he turned his plane right about face. He landed on the same field from which the plane had taken off a few minutes before and deposited the battling pair on the field. The rude interruption of their fight disconcerted them. They looked around them and seemed to become aware of their new situation for the first time. Suddenly one smiled, scratched his head slowly, and said:

"'S'wunnerful how fash' these airplanes fly now'days!"

Not so long ago, when there were no nylon lines but cigarette lines, the traffic department of Continental Air Lines received this letter of inquiry from W. D. Lane, of Midland, Texas:

"I left five packages of cigarettes on the shelf above the seat of one of your planes when I made a flight three weeks ago. Did anybody turn them in?"

The traffic department clucked its collective tongue and shook its head lugubriously. Cigarettes? In this day and age? Fat chance! But it did its duty and checked with the lost and found branch of flight service.

"Did you chaps find any cigarettes by chance?"

The lost and found branch was put on its guard at once. Like a warm-water bather stepping into a cold-water pool for the first time, the branch representative muttered an apprehensive admission of fact.

"Five packs?" the traffic department wanted to know?

"Yes," was the reply.

And so, probably with the feelings of a martyr, the cigarette-famished lost and found department wrapped up the five packs of cigarettes and returned them to Mr. Lane. But along with the cigarettes went a polite note from Continental's gaping employes who, in effect, asked:

"Where on earth did you manage to get five packs all at once? . . ."

There was the case of the 13 paratroopers who boarded one of Mid-Continent Airlines' transports for a few hundred miles' flight. The information we have does not state the condition of the weather, but it is to be assumed that it was rather bumpy on the day in

question. It seems that the hostess was having her hands full with the dozen-and-one hardy lads: they were so nervous about landing that they begged her to let them jump.

Of course, the paratroopers did not jump—but most of them were airsick by the time they reached the ground.

American Airlines has had its experiences with paratroopers, too; but these were hardly nervous. A group of them were waiting to board a plane when they caught the eye of another passenger—a full-bodied woman of the movie dowager type. She noticed their full packs and expressed her curiosity about them to the passenger agent.

"Oh, that!" he said. "Each pack contains a parachute."

"Well, get me one."

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THE HALLMARK OF HOSPITALITY

"I'm sorry, madam," the passenger agent explained, "We don't have any. Airline passengers do not need them. Paratroopers carry parachutes with them because it is part of their equipment."

The woman stared down the full length of her fleshy nose and looked as though she were about to wield her lorgnette.

"Young man," she said imperiously, "I *insist*."

The agent patiently repeated his story. Finally the idea seemed to sink into her mind. However, she wasn't the kind to be defeated by such things. She turned once more to the agent, waved one ringed hand with easy hauteur, and commanded:

"Then call up Abercrombie and Fitch and tell them Mrs. Van Blank needs a parachute *immediately*, and to send one over to LaGuardia Field right away."

Keith Kahle, vice president and general manager of Central Airlines, told us this story in a letter as far back as last May; but now is as good a time as any to tell it—and in Kahle's own words:

"In 1932 I was a student pilot. I soloed late in August. All of my time had been under the hot sun and hot air of an Oklahoma Summer. All of a sudden we had an early cold snap, and I went to the airport to fly on that cold day.

"I took off and noticed that the ship did so unusually fast, but I told myself that that was the result of my own skill, little dreaming that it was due to the cold air. I circled the field and came in for a landing, and after making two normal passes at the field, I was ballooning along instead of landing. I finally noticed that an American Airlines ship was circling around, too, waiting for me to land. Finally, the pilot of that ship flew by me as close as he thought safe, stuck his arm out of the window, and pointed down. Little did I realize that I was just as anxious to get down as he was.

"I looked down at the hangar, and lo and behold, my instructor, Bill Bleakley, now a colonel and the executive officer of Chanute Field, Illinois, actually had a shotgun, and I could tell by the movement of his hands and arms that he was going to shoot me down if I didn't land this next time.

"I went around way south of the field, and, of course, due to excellent flying skill, managed to land the little Curtiss Pusher just short of the north end of the mile-long north-south runway of what is now Will Rogers Field at Oklahoma City. I just missed my spot by a mile as I was landing into a stiff north wind. I taxied south, down to Bleakley, and he said, 'What the hell were you doing up there?'

"I said, with all the conceit of a cadet, 'Trying to land, and the damn thing would not come down.'

"Bleakley grabbed his gun more firmly, and I am sure he was considering shooting, and said, 'Stupid! The reason you could not come down was due to the fact that the air is colder. Cold air has more lift.'

"I said, 'Oh, is that so?'

"The airline pilot walked up and Bleakley said to him, 'Don't bother us, sonny; it is illegal to shoot a man.'

"Both walked off, and I sat there trying to figure out about the cold air."

We hate to kid the ladies—they're such lovely things—but we just can't let this one pass. And we have it on good authority from American Airlines.

This woman called up reservations and informed the agent that she was planning a trip by plane. Would the airline be kind enough to inform her which airplane stamp in her book she would need?

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Report on AIR FREIGHT

By JERRY W. MARTIN
Market Analyst, Fairchild Aircraft Division
Fairchild Engine and Airplane Corporation

This report incorporates the results of a tabulation of the cities presently served by the air freight services of the certificated domestic airlines. It has as its purpose the presentation of preliminary data from which a current evaluation can be made of the extent of the air freight service now being offered by the domestic airlines. In order to simplify the report, no effort was made to include smaller cities in the general trading area surrounding larger cities. It is to be expected that new tariffs now in the process of preparation by the airlines, when released, will materially alter the findings of this preliminary report.

A SIGNIFICANT measure of the extent of participation by the certificated airlines in the development of air freight (as opposed to air express) will be found in the geographical distribution of the air freight service which they decide to offer over their systems. The number and location of the cities served will be determined both by the decisions of individual carriers with respect to inaugurating air freight service over their systems and the particular points they are certificated to serve.

Althought not presently prohibited by economic regulations from serving off-line points on a non-scheduled basis, the certificated carriers are not expected to compete actively for off-line business until they have developed the potential over their own routes. Also it is to be expected that the carriers will exercise a certain amount of "diplomatic" caution about incurring the ill will of their fellow carriers by the making of non-scheduled flights out of their own territories. The problems of scheduling, maintenance, and ground handling will also be a deterrent to this type of development.

Aside from providing different rates on different classes of goods, the chief distinguishing characteristic between air express and air freight is that the latter service is based upon higher minimum weights than air express. It is usually a "deferred service" subject to delays for available space whereas air express is not. Also, the Air Express Division of the Railway Express Agency issues one tariff for all participating carriers for air express whereas each individual carrier issues its own air freight tariff.

Stages of Planning

It is most unfortunate that it has not been possible up to this time for the scheduled carriers to have worked out among themselves a uniform tariff and to have arranged for interchange of cargo, thus permitting a general through service on air freight the same as for air express.[1] It is quite apparent that the scheduled carriers are in different stages of planning on air freight at the present time and that full cooperation and joint planning does not exist. Undoubtedly, considerable additional experimentation and research will be undertaken by the individual carriers before they reach the stage of development in air freight which will bring about unified action.

Meanwhile six carriers have published or have announced the forthcoming publication of individual air freight tariffs.[1] These carriers are:

AMERICAN AIRLINES
BRANIFF AIRWAYS
EASTERN AIR LINES[2]
TRANSCONTINENTAL AND WESTERN AIR
UNITED AIR LINES
WESTERN AIR LINES

American issued their tariff October 15, 1944; TWA on July 1, 1945; and Braniff December 1, 1945. Eastern and United have announced new tariffs. Western became a participating carrier of American Airlines' Tariff for shipments from San Francisco to Los Angeles via Western and then over American to all points served by American. A complete service to the shipper is essential to the proper development of air freight and will be the prime motivating factor in the development of through services.

A total of 73 cities now receive air freight service. Of these, only as many as 51 have direct service one to the other. That is, from any one city to each of the others. The remaining 22 have direct service only to 30 other cities. Although we could not expect air freight service in its initial phase to parallel the development that exists in air express, it was hoped that the scheduled carriers would seek the

[1] Since the compiling of this report, Continental Air Lines announced an air freight tariff. Last month's AIR TRANSPORTATION reported that "TWA has entered into an interline arrangement with Continental which will permit through air freight service, and rates between all cities on both systems."

[1] Continental Air Lines should be added to this list.

[2] When this was received nothing was known of Eastern's air freight tariff. Further investigation showed that the airline had announced its intention of inaugurating an air freight program in an advertisement printed on the program of the recent SAE Chicago convention. A telephone call to the office of E. E. Skinner, Eastern Cargo manager, brought the assurance that air freight operations will begin this month.

advantages of mutual cooperation to a greater degree than they have to date. Tables I and II, following, give the respectively. (These are as of December 14, 1945.)

TABLE I

CITIES SERVED BY PRESENT CERTIFICATED AIRLINE AIR FREIGHT SERVICE

I. AMERICAN—50
Abilene, Texas
Akron, Ohio
Albany, New York
Baltimore, Maryland
Big Spring, Texas
Bridgeport, Connecticut
Bristol, Tennessee-Virginia
Boston, Massachusetts
Buffalo, New York
*Chicago, Illinois
Cincinnati, Ohio
Cleveland, Ohio
Columbus, Ohio
*Dallas, Texas
Dayton, Ohio
Detroit, Michigan
Elkins, West Virginia
El Paso, Texas
Erie, Pennsylvania
*Fort Worth, Texas
Hartford, Connecticut
Huntington, West Virginia
Indianapolis, Indiana
Joplin, Missouri
Knoxville, Tennessee
*Little Rock, Arkansas
*Los Angeles, California
Louisville, Kentucky
Lynchburg, Virginia
*Memphis, Tennessee
Nashville, Tennessee
New Haven, Connecticut
*New York, New York
*Oklahoma City, Oklahoma
Peoria, Illinois
Philadelphia, Pennsylvania
*Phoenix, Arizona
Providence, Rhode Island
Roanoke, Virginia
Rochester, New York
St. Louis, Missouri
*San Antonio, Texas
San Diego, California
South Bend, Indiana
Springfield, Massachusetts
Syracuse, New York
Texarkana, Arkansas-Texas
*Tulsa, Oklahoma
Tucson, Arizona
Washington, D. C.

II. TWA—5
*Chicago, Illinois
*Kansas City, Missouri
*Los Angeles, California
*New York, New York
*Phoenix, Arizona

III. BRANIFF—29
Amarillo, Texas
Austin, Texas
Brownsville, Texas
Burlington, Iowa
*Chicago, Illinois
Colorado Springs, Colorado
Corpus Christi, Texas
*Dallas, Texas
Denver, Colorado
*Fort Worth, Texas
Fort Smith, Arkansas
Galveston, Texas
Houston, Texas
*Kansas City, Missouri
Laredo, Texas
*Little Rock, Arkansas
Lubbock, Texas
*Memphis, Tennessee
Moline, Illinois
Muskogee, Oklahoma
*Oklahoma City, Oklahoma
Ponca City, Oklahoma
Pueblo, Colorado
*San Antonio, Texas
Topeka, Kansas
*Tulsa, Oklahoma
Waco, Texas
Wichita, Kansas
Wichita Falls, Texas

IV. WESTERN—2
*Los Angeles, California
San Francisco, California

* Denotes service by two or more carriers.

TABLE II

SUMMARY OF CITIES SERVED

I. American	50
II. TWA	5
III. Braniff	29
IV. Western	2
Total by Carrier	86
Non-duplicated Total	73

Some 59 of the 73 cities have only one carrier service. That is, they have access only to those cities served by the one carrier serving their own city. Of the 14 with service from more than one carrier, only Chicago and Los Angeles are served by as many as three carriers; namely, American, Braniff and TWA for Chicago, and American, TWA and Western for Los Angeles. Even with three carriers Los Angeles is without service to 20 of the other 72 cities. Chicago is the only city which has complete service to all of the other cities. Under the present system the cities which will be served exclusively by carriers such as National, Colonial, Delta, Essair, Mid-Continent, Northeast, Inland, and Western, all without entry to Chicago, will be without air-freight service to and from even that city which is in a most favorable geographic location for air freight service.

It can be stated that with less than 25 percent of the leading cities of the United States having air freight service from the certificated carriers, and with even that minimum service on a comparatively restricted basis, we cannot expect very large volumes of air-freight to move over certificated airlines in the near future. This situation, if continued, may supply the necessary stimulus for the aggressive establishment of a unified nation-wide air cargo service among non-airline interests.

Air Freight Rate Cut 40% by Expreso Aereo

Expreso Aereo Interamericano, S. A., Cuban airline which operates a daily air cargo service between Miami and Havana, has announced a 40 percent reduction in air freight rates on all general commodities.

Lockheed Shooting Star.

Lockheed P-80 Averages 584 MPH in West-East Run

Four hours, 13 minutes, and 26 seconds—that's the record set up last month by a Lockheed *Shooting Star* jet-propelled fighter plane which consumed this wee bit of time in zipping nonstop across the face of the United States, from Long Beach, California, to LaGuardia Field, New York. Two other P-80s that had taken off from Long Beach at the same time, but had stopped at Topeka, Kansas, to refuel, arrived within minutes after the first plane.

The nonstop craft was flown by Colonel William H. Councill, deputy operations officer of the Flight Test Division of the Air Technical Service Command at Wright Field. He averaged 584 miles an hour over the 2,470-mile route. The second and third planes were piloted by Captain Martin L. Smith and Captain John S. Babel.

Colonel Councill took off from Long Beach with extra fuel tanks which gave him a load of 1,145 gallons of kerosene. When he suddenly appeared over LaGuardia Field, circled, and landed, the record-smashing jet plane still had 120 gallons left.

Flying East to Joplin, Missouri, Councill kept at 35,000 feet; and from that point to Sunbury, Pennsylvania, the *Shooting Star* gained another 5,000 to 6,000 feet. After that, Councill, wearing an oxygen mask, started to ease down.

Actually, Captain Smith had taken off ahead of the colonel. Councill had jettisoned his extra fuel tanks over open country, and somewhere in the vicinity of Topeka, Kansas, he overtook Smith.

The 584-mile-an-hour speed figure was by no means Councill's fastest. He reached his highest speeds between Akron, Ohio, and New York, the top figure being 660 miles an hour. Coming over LaGuardia Field the P-80 was doing an easy 615 miles an hour. Interviewed after the historic flight, the colonel said that the transcontinental run had been made at cruising speed and that he had not attempted opening her up to the topmost speed because fuel consumption rises as speeds go up.

Showroom From The Clouds

HERE'S a new wrinkle, and credit this one to Trans-Caribbean Air Cargo Lines.

And that new wrinkle is a flying showroom — yes, sir! — a decked-out *Skytrain* with a wow of a mission. On April 1, TCAC's cloud-hugging showroom will begin a 35-day sales trip that will bring it into 16 major cities in 11 countries over a total of 16,975 miles.

Sort of like flying the mountain to Mohammed.

On the initial journey, the flying showroom offers an opportunity to North American manufacturers to exhibit their products on a tour of the East coast of South America, two countries of Central America, and two British possessions. Twenty-eight specially fitted booths are part of the equipment that will be carried on the DC-3 cargoplane. Each of these booths is 2½ feet deep, two feet long, and eight feet high; and each booth will be allocated to one manufacturing exhibitor. This will enable him to present one or more samples of his products, depending on the size.

Films, Too

In addition, the exhibitor will be able to show pictures of his other items on colored slide projectors to be supplied by the airline. The personnel of the flying showroom go somewhat beyond the regular airplane crew. Aside from the latter, the TCAC plane will carry a team of well-trained demonstrators, fluent in both Spanish and Portuguese, who will be able to explain the products in the tongue native to the country of each landing.

Of course, these flying salesmen will have been thoroughly indoctrinated and trained by each manufacturer as to their particular products. They will have all that is necessary to be "on the beam": complete knowledge of sales, deliveries, uses, and prices.

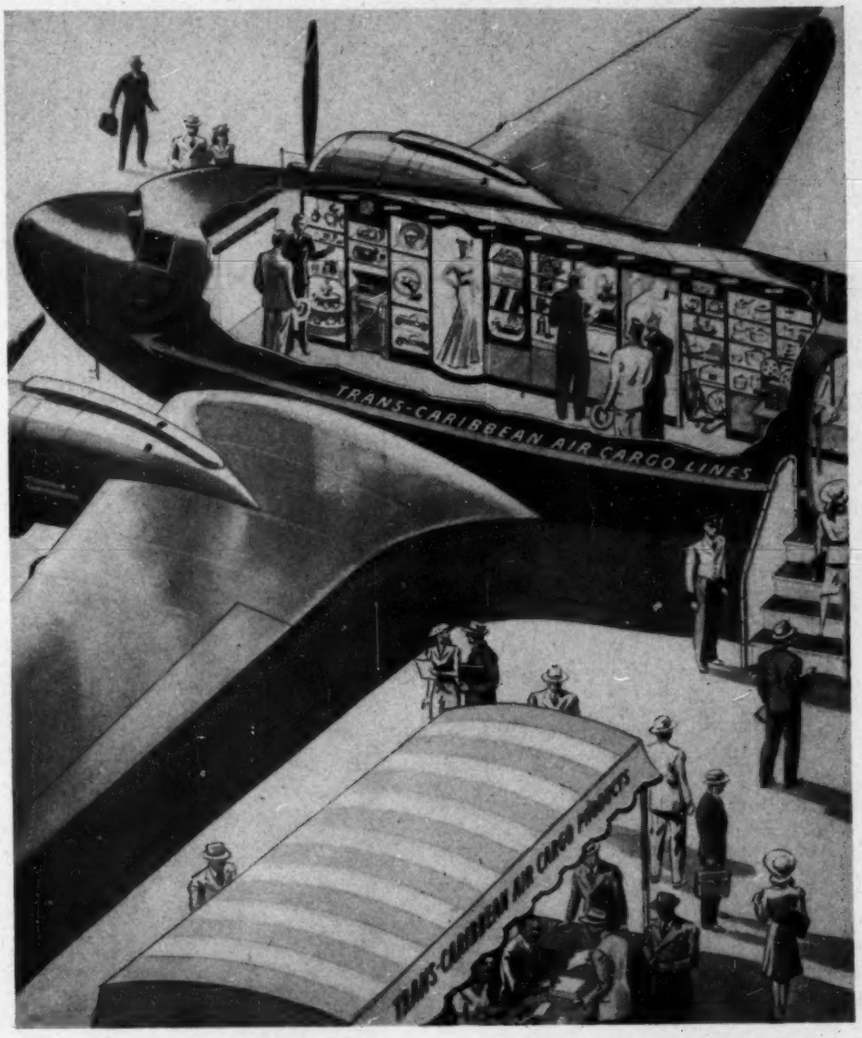
Among the items to be exhibited on Trans-Caribbean's first showroom flight will be Core jewelry, a wide variety of smoking pipes, sun glasses, plastic products, perfumes, chemicals, pharmaceuticals, cosmetics, Kayser gloves and hosiery, and Bridgeport brass.

Concurrent with the announcement of the initial trip, the air cargo line announced the organization of a new company known as Trans-Caribbean Air Cargo Products, Inc. Its function will be to distribute and act as sales agent for the products carried on subsequent trips of the flying showroom. The new company will have representatives and branch offices in most cities of Latin America.

As planned, the local staff will arrange in advance with wholesalers and retailers to view the products carried in by TCAC's cargoplanes, meet the flying showrooms at the airport, and direct the sales and distribution for those manufacturers in need of Latin American representation. Advertisements in local papers by Trans-Caribbean Air Cargo Products will herald the arrival of the airborne showrooms, giving credit to all the exhibitors.

Here's the home-and-back route the first flying showroom will follow:

New York to Miami; Havana; Port-au-Prince; Caracas; Trinidad; Paramaribo; Belem; Sao Luiz; Parnahyba; Fortaleza; Natal; Recife; Marceio; Aracaju; Salvador; Porto Seguro; Santa Cruz; Rio de Janeiro; Sao Paulo; Porto Alegre; Montevideo; Buenos Aires; Asuncion; Santa Cruz; Rio de Janeiro; Barreiras; Belem; Cayenne; Georgetown; Trinidad; San Juan; Miami; New York.



FLYING SHOWROOM—Artist's impression of Trans-Caribbean Air Cargo Lines' skyborne salesplane after it has landed some where in Latin America. The first such plane, a specially equipped Douglas Skytrain, starts winging southward in about two months.

This is the third of a series of stories on the wartime cargo- and passenger-carrying operations of various Troop Carrier Groups. The 440th ranks with the best of these outfits.

•

ON the first day of June, 1944, the men of the 440th Troop Carrier Group knew. The MPs had got tough—a little too tough. They tightened up, and no man could get off the base at Exeter in Devonshire, England.

"Boy! This looks like it!"

"Oh, I don't know," said the skeptical few. "There've been restrictions before."

But this *was* it. A day later Field Order Number One was received by Colonel Frank X. Krebs (then Lieutenant Colonel), commanding officer of the 440th. There was furious activity among the upper places: the C.O. and his staff, commanders, intelligence and operations officers.

Operations Neptune—the invasion of Normandy; one of the greatest tests in all history.

Weather delayed the big push for 24 hours; and then, at 1500 June 5, the final briefing took place. The stone-faced crews drank in the plan which would take them across the Cherbourg Peninsula. They were to drop their load of nearly 800 paratroopers, units of the 101st Airborne Division—precious cargo—near the village of St. Mere Eglise.

The C-47s stood waiting in the gloom, poised for the moment of take-off: 11 planes from each squadron, with the exception of the 98th which provided an even dozen. Subdued whispers. Quiet joshing to spark the spirit. Unspoken words of confidence. The lighting up of cigarettes and the slow ghostly streams of exhaled smoke.

"Hey, Joe—what you thinkin' of?"

"Things."

"Things? What kind o' things?"

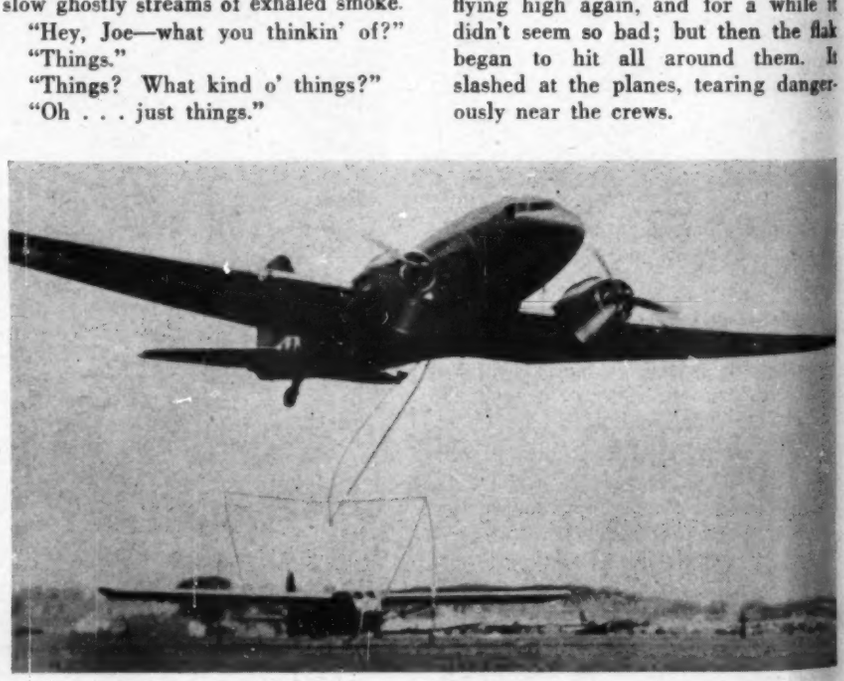
"Oh . . . just things."

Then—2350! Krebs, leading the formation, took off. His plane flew in slow circles over the ascending C-47s, like a mother eagle. Soon the 440th rendezvoused with others of the 50th Troop Carrier Wing, and then went on to a secret point called Elko where the IX Troop Carrier Command assembled the greatest armada of its kind.

Flatbush was the last point of friendly soil. The *Skytrains* dropped to 1,000 feet and kept descending to 500 feet. They knew what to expect. Any minute now. Speed was 140 miles per hour. Human cargo was their responsibility.

The crewmen were not fooled. They knew that the Nazi detection devices would not permit them to pass unnoticed. A diversionary force of RAF *Stirlings* peeled off to fake an airborne attack on another point. They dropped large quantities of silver paper strips (which have the same effect on radar as do aircraft) to confuse the German guardians of the Atlantic Wall.

Over the channel islands the 440th ran into flak. It became heavier as the mainland was reached. They were flying high again, and for a while it didn't seem so bad; but then the flak began to hit all around them. It slashed at the planes, tearing dangerously near the crews.



SNATCH PICK-UP—A C-47 of the Troop Carrier Command, in full flight, picks up a cargo-laden CG-4A glider.

The drop zone was near. Tense crews sent back messages to the waiting paratroopers set to hit the silk. Flak became even more intense. But there was a definite mission to perform, and in spite of the hot reception they were being given the transports nosed down to 700 feet and reduced speed to 125 miles an hour. This was further cut to 110 miles an hour at which speed the drop was to be made.

The Drop

There it was—*the signal!* The human cargo began dropping out of the Douglas planes in fast, precise movements, forming a spectral picture as the full-blown 'chutes floated down through the scarred morning. Long months of training had gone into making this mission and the others to follow a success. There was that satisfaction over having delivered the goods on time at the right place, but there still was another worry: the planes had to get back to base. A *Skytrain* of the 95th Squadron and two more of the 96th crashed as the result of hits by the German ack-ack crews—but not before the paratroopers had made their drops.

That was the D-Day job, successful to the hilt. There was natural elation. However, the 440th had only begun its job. Now there was cargo-carrying in earnest. The baptism of fire was a thing of the past, and the Group got down to a hard-punching routine.

Take, for example, the day, June 23 —D-plus-17. Beginning at 0430, five planes took off every hour from strips at Aldermaston, England. A total of 65 C-47s flew 260,900 pounds of ammunition to France, returning with wounded men and 1,000 pounds of mail.

Transport missions came thick and fast. There was no let up. The Allies were racing eastward, and it was by air that they were best supplied. *Skytrains* of the 440th flew capacity loads of men, fuel, food, and other types of badley needed supplies. They towed CG-4 gliders crammed with ordnance and troops.

TO THE ATTACK—Transported to the drop zone by Troop Carrier Skytrains, fully-armed paratroops float toward earth to press the attack on the Nazis.

Operation Neptune had put the indelible stamp of "veteran" on the Group. There were more outstanding jobs to follow: Operation Dragoon (Southern France), Operation Market (Holland), Operation Repulse (Bastogne), and Operation Varsity (the Rhine).

The 440th cut a wide swath through the skies of Europe, feeding the advancing troops so that their armed might would not break down. On return trips were brought the wounded, most of whose lives were saved by the effective transport methods worked out by the Troop Carrier Command.

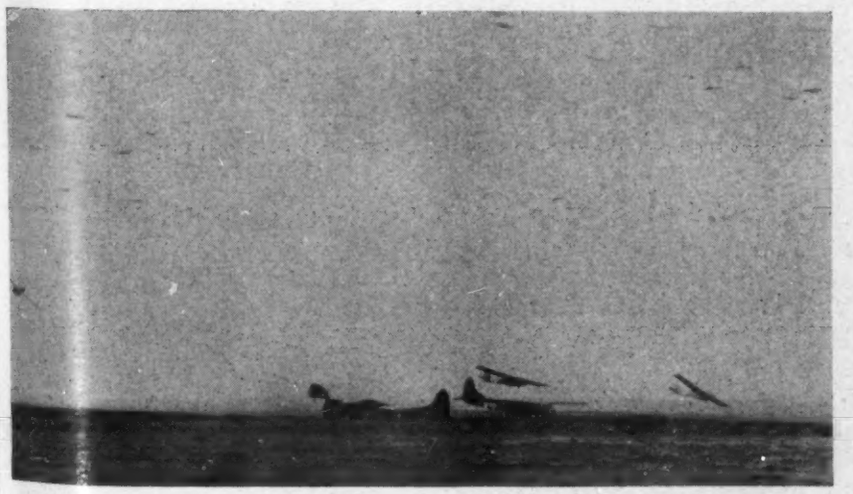
The official history of the 440th Troop Carrier Group has this to say:

"All through the campaign in Europe, aerial resupply had been an important factor in replenishing the stockpiles of the Allied armies at the fronts. The original planners of air war had long before counted upon using the C-47s for hauling freight. From the earliest days of the European War, in fact, the 440th Troop Carrier Group had flown resupply missions. The versatile C-47s rarely rested idly on the airfields save when maintenance requirements caused them to be grounded. When there were no invasion missions to be flown, no parachutists to drop, or gliders to tow behind the enemy's lines, the airborne carryalls of the Group were still busy in their added roles as flying freight cars, air ambulances or military airliners.

At High Pitch

"After the aerial invasion of the Rhineland and the subsequent runaway breakthrough of the unstoppable columns racing toward Berlin, the job that lay ahead for the freight-hauling C-47s in the final European offensive was to dwarf completely all similar achievements of the past and to outstrip the wildest hopes and dreams of the planners. In the dramatic plunge of the Twelfth Army Group from the Moselle River to the Rhine and to the Elbe, the time-conserving speed of supply by air was not only to break all existing records for such operations but also to add a new dimension to the science of logistics."

This was true, for the time required to move the endless supplies of war by surface means had been slashed to a fraction by air transport. The C-47s had load capacities of 5,000 pounds, but often the limit was upped to rush materiél. This was true not



BEHIND THE GERMAN LINES—Gliders of the 440th with their valuable cargoes land somewhere in Holland . . . Mission completed!

SUPPLY BY AIR—Skytrains circling the drop zone as one cargoplane drops parapacks. The supply missions of the 440th continued until well after V-E Day.

only of the 440th, but of other Troop Carrier Groups as well.

V-E Day drew nearer. Each day found the supply planes flying farther East.

"There were hardships and trials aplenty," says the history. "There was always imminent danger, too. This was the war-finishing sweep and only C-47 fleets could keep up with the greased-lightning advances of General Patton's tanks and racing motorized infantry who would stop for nothing but lack of fuel and supplies. All else was forgotten as the 440th kept the cargoes going.

"It was a long flight from the A-50 airfield at Bricy, near Orleans, France, to the German lines. Hardly a sortie was made that did not consume six or seven hours in the air, going and returning. Often, too, the Group's allotment of tonnage to be delivered was so great that it could not all be borne in a single trip, so the returning planes were reloaded on their return to the base airdrome and sent off again toward the Rhine not to return until long after dark.

"During the period from late March through the month of May, the flying crews were awakened at dawn. There was little chance of dawdling. Sleepy-eyed, yawning and still tired from the previous day's flights, the pilots, co-pilots, navigators, crew chiefs and radio operators took the rattling ten-mile ride from their quarters to the field and began loading the aircraft to be ready for take-off as soon as daylight permitted it. At night, convoys of service units brought in the freight for the day's missions, piling up the masses of tonnage in huge piles beside each ship's parking stand. The crews pitched in together, officers and enlisted men alike."

V-E Day Coming

And then, early in the morning of May 7, 1945, the personnel of the 440th heard that the war in Europe would be over by midnight next day. A let-up in the cargo-carrying operations? Not on your life! Right through the month of May the *Skytrains* of the Group swung over Germany, Austria, and Czechoslovakia, some of these flying as many as four sorties a day.

Emergency food, drugs, wounded men, liberated prisoners, deportees—all came under the transportation aegis of the 440th. But now the officers found the time to do a little figuring, and what they saw was quite satisfactory. For example: in April alone, more than 2,000,000 air miles had been flown by the Group, transporting over 500,000 pounds of freight and 10,000 evacuees, liberated prisoners of war, and wounded troops.

With reference to that month's record, the 440th points with considerable pride to the fact that the loads carried "amounted to the total tonnage which might have been borne by a convoy of over 2,700 of the Army's monster 6x6 trucks stretching over 35 miles of road"; or, to put it another way, the equivalent of 350 American railroad freight cars. The time required to deliver a full load of cargo on the 650-mile sorties was only a few hours; road convoys, covering the same distance on the ground, spent days, even weeks.

Britain May Buy 5 Constellations

Hard on the report that Britain was not willing to fall behind in international commercial aviation while it waited for its own planes to come off the assembly lines, comes the news that the British Ministry of Aviation would purchase five Lockheed *Constellations*.

Ivor Thomas, who spoke for the ministry said that Britain "must be large-minded in civil aviation and cast away the impediment of petty nationalism." He predicted that the Anglo-British agreement negotiated in Bermuda "would be a great development of air transport."

BOAC, which now operates twice a week to the United States, using Baltimore as a terminal, is expected to inaugurate daily service across the North Atlantic in July. For internal transport services, Britain may make use of 25 captured German Junkers-52s—at least until British-made aircraft are available.

Flyers' Group Organized

A nationwide, peacetime organization, known as the Military Pilots' Association, has been formed by flyers of the Army, Navy, and Marine Corps. The association is primarily a sort of air fraternity, but it also has more serious purposes, such as helping veteran pilots find jobs. All former American military pilots are eligible.

Surplus Transports

It has been disclosed in an aircraft sales report issued by the Office of Foreign Liquidation Commissioner that 35 surplus Army transports have been sold for $969,000 and another 14 leased for $210,000 to seven European countries now reestablishing their continental network of prewar airlines.

DAL Weight System

Delta now uses an average weight estimate of 165 pounds for every passenger, instead of asking each individual for his actual weight, in order to save time (not embarrassment). Baggage continues to be weighed.

Colombia Plans

The Colombian Government plans to spend 70,000,000 pesos on airports and facilities.

IT'S AN Air WORLD

REG. U. S. PAT. OFF.

By L. A. GOLDSMITH, *Economic Analyst,* AIR TRANSPORTATION

SIDELIGHT ON MEXICO

AS a rule, time marches on with measured majestic steps in the land where Montezuma once held sway in his "halls" of fabulous golden splendor. It is a far cry from the days of the ancient Aztecs to the dawn of the Air Age. But the transition has been made. Great strides have already been taken in the development of air transportation in Mexico; yet its potential value to the country is only now beginning to be recognized.

Air transportation in Mexico is predominantly controlled by United States interests—either through direct traffic by United States airlines, or by Mexican airlines controlled by United States airlines; or by Mexican airlines controlled by United States citizens. In fact, from the point of view of both hours and miles scheduled to be flown each week, the airlines controlled by United States interests account for approximately 80 percent of the total activity.

Four foreign airlines operate in Mexico. Three of these are United States flag carriers: Pan American, American, and Braniff. The fourth is TACA, a Central American airline, controlled by United States interests.

Regular Service

The highest frequency of service to Mexico is that of Pan American, which averages about 14 round trips per week. This schedule is followed closely by American, and Compania Mexicana de Aviacion, S.A. The highest average speed of any airline operating in Mexico is that of TACA, which operates Lockheed-14 aircraft. Mexico City, the capital, is the only city in Mexico served by TACA. The other airlines in Mexico using modern multi-motored equipment have average speeds in excess of 130 miles an hour. Companies using only single-engined equipment have average speeds of less than 100 miles an hour.

The industrial airlines have a special function. There are two kinds of commercial airlines in Mexico—industrial airlines and common carriers. Industrial airlines is authorized for the purpose of serving *a particular industry in a given region.* Such airlines do not carry mail for the postal authorities, transport passengers, or cargo on a public basis. Nor do they publish schedules and tariffs.

The major importance of the industrial airlines is the air cargo carried. Their express and freight volume amounted to a quarter of the total for all of Mexico in 1943. Their route mileage is also of significance, amounting to about 5,000 miles, or about one-sixth of the total for the country—actually 17.4 percent in relation to the total number of unduplicated route miles.

There are nine industrial airlines in Mexico. One of the common carriers, Transportes Aereos Mexicanos, S.A. (TAMSA), operates certain routes as industrial lines; these are included in the forementioned number. Empresa Aero-Chiclera, S.A., which is authorized as a common carrier, operates entirely as an industrial airline and is

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so classified. These industrial airlines serve special industries, which, because of their location, are usually inaccessible by other means of transportation. They are, therefore, dependent on the airplane for the transport of supplies, company mail, personnel, and outgoing products.

Antonio Gutierrex Sanchez, one of the industrial airlines, carries ore samples, silver, chemical reagents, payrolls, and machine parts for the silver mines in the Northwest. Compania Mexicana Constructora Azteca, S.A., transports supplies, workmen, and payrolls necessary for the construction of airports in Southeastern Mexico.

The remaining industrial airlines serve the chicle areas of the Yucatan peninsula and adjacent regions. Five of these operate as integral parts of the chicle concerns, and the others as aviation companies under contract to one or more chicle producers.

Like rubber, chicle is obtained by tapping trees growing in dense tropical jungles. The jungle is so dense that no roads or railroads could be built to reach the location of the trees. Native workers used to take the loads of chicle to gathering camps at the edge of the jungle—a journey which required several weeks. Today aviation has changed all that. The aviation companies have established landing fields in the forests surrounding the headquarters of the chicle contractors. From these contractors' camps the chicle is flown out to a collecting point (usually a seaport or a railhead) 20 to 150 miles away.

Foreign Airlines

Foreign as well as domestic airlines operate as common carriers in Mexico. The foreign lines serve only five Mexican cities; the domestic companies serve 152 points within Mexico and two foreign cities, Los Angeles and Belize (British Honduras). There are thirteen Mexican airlines operating as common carriers. Three are controlled by United States airlines, three by United States citizens, and seven by Mexican citizens.

Mexican airlines controlled by United States airlines are:

1. *Compania Mexicana de Aviacion, S.A.* This company was established in 1928 and was wholly owned by Pan American until late in 1944 when about 40 percent of the shares were sold to Mexican citizens. Mexicana serves every important part of the country and extends beyond the borders to Los Angeles and to Havana. Service to Havana was suspended during the war to make more aircraft available for domestic routes. This is by far the most important airline in Mexico. It has an unduplicated route mileage of 4,200 or about one fifth of the total.

2. *Aeronaves de Mexico, S.A.* This airline was established in 1935, and is controlled by Pan American. It now operates three separate networks by virtue of internal expansion and the acquisition of three other airlines.

3. *Lineas Aereas Mexicans, S.A.* This company was established in 1934 by a United States citizen. Late in 1943, United Air Lines bought 80 percent of the shares.

Mexican airlines controlled by United States citizens are:

1. *Comunicaciones Aereas de Veracruz.*
2. *Aerovias Azteca, S.A.*
3. *Aerovias Braniff, S.A.*

Mexican airlines controlled by Mexican citizens are:

1. Aero-Transportes, S.A. — formed in 1943 but operations began in 1944.
2. Transportes Aereos Mexicanos, S.A.—formed in 1943.
3. Servicio Aereo Panini — established in 1936, and is the most extensive Mexican-owned airline operating full public services.
4. Transportes Aereos de Jalisco—established 1936.
5. Transportes Aereos de Tampico S. de R.L.—founded in 1940, and the shortest airline in Mexico. It connects the gulf port of Tampico with nearby oil fields and sugar plantations.
6. Servicio Aereo de Leopoldo Lopez T—a small airline established in 1943, forming a link between Chihuahua and three mining communities in Northwestern Mexico.
7. Servicios Aereos de Durango—began operations in 1944 and serves several isolated mining communities in plateau North of Durango.

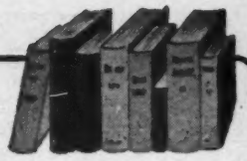
WHEN A "FIRST" WAS MADE—Scene which presented itself at Mexico City last year when the first all-cargo air shipment from the United States arrived in an American Airlines Airfreighter. Today official greeters are quite unnecessary, for such shipments have become commonplace.

The route mileage of common carriers operating in Mexico unduplicated within each company aggregate over 23,000 miles as of May 1, 1945—an increase of 40 percent over March, 1943. About 70 percent of this mileage is operated by United States flag carriers, or by airlines controlled by United States airlines or citizens.

The part aviation can play in the development of Mexico is fully recognized by her Government. Official views issued by the Secretariat of Communications and Public Works in 1944 underscore the Government's attitude in this regard:

"Air transport in the Republic is no longer of an experimental character. It has become an efficient general means of communication of the first importance. The economy of the country requires that it shall be developed in order to comply with that economy's needs. . . .

"Particular attention will be given to stimulating civil aviation, since the Government considers that every effort made to develop it and improve it will be small in comparison with the results obtained. It must not be overlooked that the development of aviation in these times is one of the most important phenomena in the world, and that in the postwar period it will be of incalculable transcendence for the life of all peoples. Therefore, Mexico will continue to stimulate the development of air routes, creating airfields, and making every kind of effort to improve civil aviation."



LEGAL NOTES on Air Transportation

By GEORGE BOOCHEVER

Chairman of the Legal Committee and General Counsel to the Aviation Section, New York Board of Trade

BEFORE discussing the Federal legislation affecting civil aviation it might be well to take a quick glance at the development of the industry, itself. After the Wright Brothers demonstrated the practicability of heavier-than-air machines by their flights in 1903, interest in air transportation grew slowly until after 1908. In the meantime numerous types of flying machines were constructed and principles of controlled flight developed. World War I brought about an enormous interest in airplanes, commercial air transportation receiving a great impetus by the surplus planes and parts and from the large number of flyers on hand after the war.

Another important factor in the development of air transportation was the interest displayed therein by the Post Office Department which began with the flight of a few sacks of mail from Nassau, Long Island, to Mineola, Long Island, in September, 1911. Beginning with 1916, appropriations for air mail subsidies were an important factor in the growth of air transportation.

The first Federal legislation regulating air transportation was passed in 1926, and it was not until 1928 that the Bureau of Air Commerce in the Department of Commerce began enforcing some standards of safety. The Air Commerce Act of 1926 charged the Department of Commerce with the responsibility of fostering air commerce, developing and establishing safeguards for such commerce, and encouraging the establishment of airports, civil airways and other air navigation facilities.

With the Lindbergh crossing of the Atlantic Ocean in 1927, a veritable air transportation boom took place. Innumerable small airlines sprang up, lasted a few months, and usually went into bankruptcy. Thus, in 1929, there were 48 airlines which were reduced to 16 on January 1, 1930. (This figure does not include those airlines which combined with other airlines and, therefore, lost their identity.)

Route Consolidation

In 1930, the Watres Act, which was designed to avoid unprofitable operation of mail and passenger lines enabled the Postmaster General to enforce the consolidation of various air-mail routes and was responsible for the organization of three transcontinental lines: United Air Lines, American Airlines, and Transcontinental and Western Air.

The total number of airlines dropped from 47 in 1930, to 14 in 1932.

In 1934, there came to light collusion between mail carriers and post office officials and other abuses which resulted in canceling all air mail contracts and flying of the mail by the Army. The Air Mail Act of 1934 terminated this situation and restored the role of private air mail carriers.

The period which followed brought about many changes and led to the adoption of the Civil Aeronautics Act of 1938, which set up the Civil Aeronautics Authority to exercise complete control over every phase of interstate airline operations. Although this act appeared to operate splendidly, two plans on Government reorganization were adopted in 1940 which transferred certain powers from the Authority to the Civil Aeronautics Administrator, abolished the Air Safety Board and transferred its functions to the Civil Aeronautics Authority, changed the name of the Authority to Civil Aeronautics Board and shifted the entire Authority within the framework of the Department of Commerce. Under this plan the Administrator of Civil Aeronautics became a member of the Department of Commerce subject to the Secretary. The CAB, however, retains its complete independence as an administrative agency, although all reports come to the President via the Secretary of Commerce.

The regulatory activities of the Civil Aeronautics Board may be summed up as follows:

The Civil Aeronautics Board:

1. Economic regulation, including issuance of certificates of public convenience and necessity; fixing of air mail rates; regulating of passenger and property rates; passing upon mergers and consolidations; and performing various other related economic regulatory duties.

2. The making of safety rules and the suspension and revocation of various certificates (including pilot's certificates) after notice and hearing.

3. The investigation and reporting of aircraft accidents, a function formerly performed by the Air Safety Board.

The Administrator:

1. The construction, operation and maintenance of the Federal airways system.

2. The development and testing of radio aircraft devices and equipment of many types for eventual service use.

3. The development of airports.

4. The issuance of certificates of airworthiness for aircraft and components after tests and inspection; examination and certification of airmen, including the denial of aircraft, airmen, and other safety certificates when deemed necessary; and the renewal of

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existing certificates. Investigation of violations of the safety provisions of the Civil Aeronautics Act, as well as infringements of the safety rules promulgated by the CAB in the Civil Air Regulations.

5. Administration of the Civilian Pilot Training Program.

As to the procedure of the CAB:

It is substantially similar to that followed by the Interstate Commerce Commission in the regulation of carriers subject to its jurisdiction. Ordinarily, a proceeding instituted before the Board and concerning, let us say, an application for a new line is heard by a trial examiner designated by the Board, except in cases of special importance, when the members of the Board may hear the proceedings themselves. An attorney from the legal section of the Board appears at all formal proceedings to represent the public interest. This attorney may file exceptions to the examiner's report and present oral argument to the Authority where provided for.

The trial examiner makes his findings independently of any attitude taken by the public attorney. Parties to the proceeding may file exceptions to the examiner's report and briefs in support of their contentions. The Board, after considering all evidence and briefs together with the examiner's report and any exceptions or subsequent oral argument, issues its final decision. The district courts of the United States have jurisdiction to enforce obedience to the orders of the Board or to prevent violations of the Act by mandamus or injunction. The orders of the Board are subject to review by the circuit courts of appeal.

As matters stand today, the aviation industry is governed primarily by the Civil Aeronautics Act of 1938, together with the Air Commerce Act of 1926, as amended; the Clayton Anti-Trust Act as amended to apply to civil aeronautics; the Aircraft Confiscation Act of 1939, authorizing confiscation of aircraft carrying contraband articles, such as narcotic drugs, firearms, counterfeit money, etc.; and the Public Airports Act, as amended, which authorizes the leasing of public lands for use as public aviation fields.

PICAO Invites

The Governments of France, Egypt, and the United States have been invited by the Provisional International Civil Aviation Organization to convene regional meetings on international civil aviation. France has been asked to convene a meeting of the European region, including the Mediterranean area, in Paris; Egypt to assemble a meeting for the Middle East region; and the United States, a meeting for the Caribbean region.

NEW YORK TO BRAZIL—Just before the take-off of a Cruzeiro do Sul cargoplane from LaGuardia Field to Belem, Brazil—the first nonstop flight of merchandise along this route. On hand to say "Happy Landings" were (left to right): John Nasht, representing Trans-Caribbean Air Cargo Lines; Francis X. Heidl, Bluefries-New York, Inc.; Thomas J. Eppley and William V. McTaggart, Trans-Caribbean; Jose Garrido Torres, director of the Brazilian Trade Council; Elson van der Linden, Cruizeiro pilot; J. Bento Ribeiro Dantas, Cruzeiro president; John F. Budd and Henry W. Fischer, respectively publisher and advertising manager of AIR TRANSPORTATION; and Daniel Chalk, Trans-Caribbean.

11-Hour Coast-to-Coast Air Mail Flown by TWA

Eleven-hour, nonstop coast-to-coast air mail service is now a reality. Transcontinental & Western Air has advised the Post Office Department that effective February 15 this service will be inaugurated on its route between New York and Los Angeles.

This flight is scheduled to leave LaGuardia Airport, New York City, at 2:00 p. m. and is due to arrive at Los Angeles at 10:00 p. m. A connecting flight will leave Los Angeles at 10:30 p. m. and arrive at San Francisco at 12:35 a. m. The eastbound flight will leave Los Angeles at 11:00 a. m. and arrive in New York City at 11:45 p. m. A connecting plane will leave San Francisco at 8:30 a. m. for Los Angeles.

Patterson Named

W. A. Patterson has been named a member of the Air Transport Committee of the International Chamber of Commerce. The committee concerns itself with basic matters involving international air transport.

Flying to Europe?

Here's a handy table for your convenience. The air travel rates quoted below are from New York, one way. Just add 15 percent Federal tax. There is a 10 percent discount for all round trips.

Amsterdam	AA	$440
Copenhagen	AA	837
Lisbon	PAA	295
London (Hurn)	AA, PAA	375
Paris	TWA	375
Shannon	PAA	249
Shannon	AA, TWA	334
Stockholm	AA	891

Otto Heads New Feeder Airline

Formation of a new feeder airline—Otto Airlines, Inc.—to operate a network of air routes in New York, New Jersey and Pennsylvania, was announced at Newark late last month.

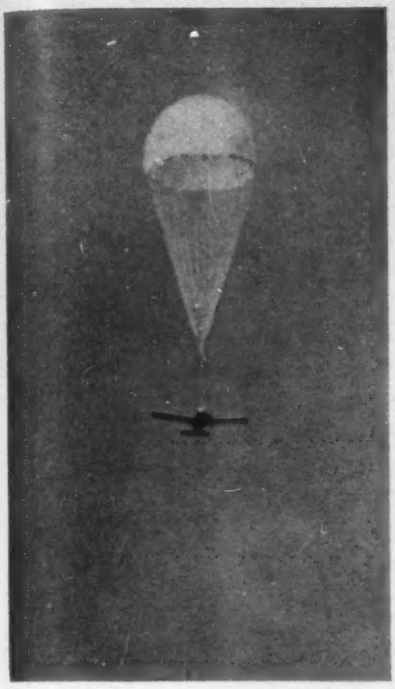
Bowman R. Otto

The Board of Directors of the new company includes Bowman R. Otto, president of the Feeder Airlines Association, who was named as president; and Captain Gill Robb Wilson, formerly aviation director of the State of New Jersey and former president of the National Aeronautics Association, director. Three other members of the five-man board are Eugene Vidal, president of Vidal Research, Inc., and a member of a board of Northeast Airlines; John E. Parker, Jr., former Navy commander, of the investment banking firm of Nugent & Igee; and John S. Wynne, aviation attorney of Washington, D. C.

Otto Airlines, Inc., has acquired all the assets of the former airline division of the Otto Aviation Corporation, and will continue the operations of that division. In October, 1943, an application was filed with the CAB for operation of a New Jersey intrastate airline. This has since been modified, in the light of the formation of a new line, to an application for interstate airline operation.

The routes applied for radiate from Newark and New York City. They cover New York State as far north as Binghamton, include Scranton, Allentown and Philadelphia in Pennsylvania, and cover Camden, Atlantic City, Cape May and 16 other communities in New Jersey.

BASEBALL 'CHUTE



BASEBALL 'CHUTE IN ACTION — A Navy robot target plane being borne earthward by the non-oscillating parachute. This was demonstrated last month at the All-American Air Maneuvers in Miami.

PARACHUTED cargo was brought into the picture again early last month when a so-called baseball parachute which successfully delivers the goods when dropped at the maximum speeds of propeller-driven aircraft was given a public demonstration for the first time at the All-American Air Maneuvers in Miami.

Developed during the war to perform an important function in aerial warfare, the 'chute was released at 200 feet from a Navy fighter plane following a 5,000-foot full power dive. The parachute model used was a four-foot canopy made of four-ounce rayon fabric, and the cargo was a 60-pound smoke pot. Also demonstrated by the manufacturer, General Textile Mills, Inc., was the parachute's construction characteristics including the special shock-absorbing hem cord.

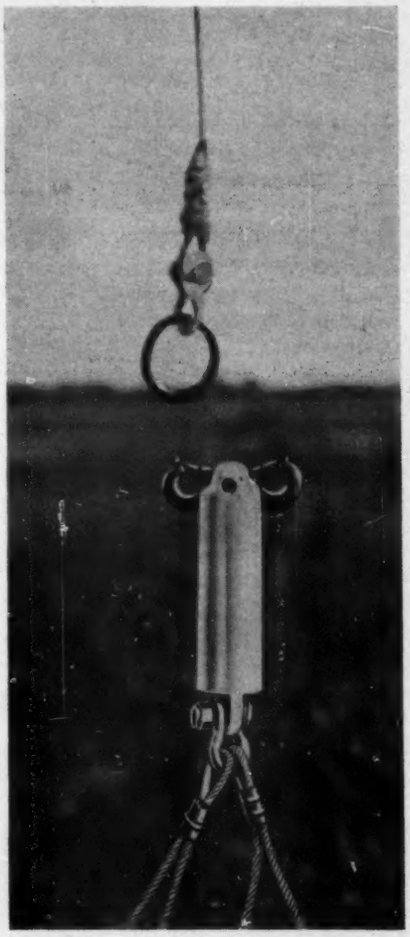
Action of the floating hem cord causes a gradual inflation of the canopy rather than the instantaneous and explosion-like opening characteristics of the conventional parachute. This action constricts the mouth of the 'chute, allowing only enough air into it to give a pear-like effect until it assumes a vertical position and the full weight of the cargo is registered on the floating hem cord.

As the load of the cargo is transferred to the hem cord, the cord expands to its full circumference, thus permitting full inflation of the parachute. A cushioning effect is brought about by the multiple action of the baseball 'chute.

Another demonstration of this new-type parachute was designed to show its non-oscillation characteristics. A radio-controlled Navy target plane was sent aloft to be landed in a normal flying position by a single parachute. Oscillation is a primary cause of injury to jumpers or damage to cargo, as it causes the parachute load to strike the ground while swinging back and forth. Unequal distribution of the air pressure in the canopy results in oscillation, but the baseball parachute has eliminated this condition through its hemispherical canopy, which affords equal distribution of air pressure at all points.

Further demonstrations of the new-type 'chute included a variety of cargo drops. One of the more significant ones was from a plane flying at normal speed only 20 feet above the ground. This drop required the parachute to open in a fraction of a second after being ejected from the plane. Also shown by General Textile Mills for the first time since its release from military security was the company's automatic release mechanism for freeing parachutes from cargo loads after landing.

The company, which has its headquarters in New York with a plant at Carbondale, Pennsylvania, is headed by Leonard P. Frieder. He and Walter P. Finken, chief engineer, are co-designers of the baseball parachute.



NEW-TYPE RELEASE — In the act of touching the ground, the release of tension causes the sister hooks of the release to fly apart and loose their grip on the parachute ring. The cargo is now parted from the parachute and in no danger of being dragged by the wind.

Airport Plan of SPA To Aid Local Governments

Senator James M. Mead of New York, chairman of the National Defense Investigating Committee, has disclosed that detailed plans have been worked out by the Surplus Property Administration to provide for the disposal of surplus airports "in such a manner as to assure an adequate, efficient and properly maintained nationwide system of public airports, both for national defense and the continued development of civil aviation."

"The new program offers a great opportunity to our local and State governments," Senator Mead said, "to play an increasingly important role in the great future that lies ahead for American aviation."

Under the Surplus Property Administration plan, "provision is made . . . for the disposal of surplus airport properties . . . to States and local governments without cash payment in consideration and acceptance . . . in the form of conditions, restrictions and reservations providing for the use and preservation of the airports in the interest of civil aviation and the national defense."

Goodyear Plans to Resume Blimp Flights This Summer

Resumption of blimp operations over the country this Summer is seen in the announcement by the Goodyear Tire and Rubber Company of the purchase of seven L-type airships from the Government, through the War Assets Corporation.

Built by Goodyear during the war, the L ships were primarily used for training pilots for duty on the larger K and M-type airships. The L ships were patterned after the Goodyear blimp fleet which saw patrol duty in the early part of the war until the larger ships could be built.

"Return of the ships will take three or four months," Karl Fickes, manager of the Wingfoot Lake Airship Base stated. "Probably not more than three of the blimps will be put into service immediately. They will be used primarily for demonstration and experimental purposes, as part of the program to promote establishment of transoceanic service by full-size rigid airships."

Goodyear's prewar blimp fleet carried more than 400,000 passengers some 4,000,000 miles without an injury to a single person.

Seasonal Production of Vegetables, Florida, 1942-43[1]

(Year beginning August)

Item	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Total	Per cubic foot
	Tons	*Tons*	*Tons*	*Tons*	*Tons*	*Tons*	*Tons*	*Tons*	*Tons*	*Tons*	*Tons*	*Tons*	*Tons*	*Lb.*
Cabbage	...	...	.....	55	4,512	12,489	14,122	32,173	16,652	3,818	329	.....	84,150	26.1
Celery	...	...	.....	.....	8,769	18,607	24,044	31,163	24,999	23,899	2,759	.....	134,240	....
Cucumbers	...	...	1,746	1,518	555	178	.....	21	1,970	5,155	89	.....	11,232	38.6
Cantaloups	...	...	.....	.....	.....	.....	.....	.....	.....	.....	780	.....	780	32.7
Eggplant	...	...	82	349	311	593	955	751	1,433	1,685	2,099	207	8,465	26.5
Irish potatoes	...	...	.....	.....	2,479	11,112	9,706	14,594	7,019	35,960	17,292	13	98,175	48.2
English peas	...	...	.....	.....	194	777	250	114	26	4	.....	.....	1,365	....
Peppers	...	...	85	1,520	2,644	2,873	2,598	1,697	2,629	4,675	2,031	173	20,925	20.1
Strawberries	...	...	.....	.....	123	490	932	558	609	96	.....	.....	2,808	38.6
Tomatoes	...	...	13	3,375	6,571	6,131	9,547	5,119	5,371	30,179	2,530	.....	68,836	43.4
Watermelons	...	...	.....	.....	.....	.....	.....	.....	138	3,478	38,546	6,848	49,010	....
Lima beans	...	...	57	365	360	294	300	54	721	1,177	232	.....	3,560	25.7
Snap beans	...	...	2,597	17,773	19,761	16,236	10,569	3,445	22,067	25,303	2,085	.....	119,836	24.1
All lettuce	...	...	.....	568	2,796	3,166	1,563	3,866	649	55	.....	.....	12,663	23.9
Escarole	...	...	.....	539	2,260	1,984	1,095	1,501	1,565	445	.....	.....	9,389	19.3
Sweet corn	...	...	.....	682	.....	.....	.....	.....	.....	1,264	3,787	.....	5,733	28.1
Field peas	255	...	.....	.....	.....	.....	.....	.....	.....	17	286	792	1,350	....
Okra	...	...	.....	.....	.....	.....	.....	.....	.....	447	854	.....	1,301	....
Squash	...	...	312	344	101	397	495	1,012	1,285	431	.....	.....	4,377	....
Beets	...	...	.....	.....	.....	.....	129	130	66	.....	.....	.....	325	23.9 (a) 41.8 (b)
Chinese cabbage	...	...	.....	.....	.....	.....	91	119	90	.....	.....	.....	300	....
Mustard	...	...	.....	92	52	40	4	40	.....	122	.....	.....	350	....
Turnips	...	...	.....	339	284	417	65	489	.....	156	.....	.....	1,750	23.5 (a) 43.4 (b)
Onions	...	...	.....	.....	.....	24	62	64	50	50	.....	.....	250	43.0 (c) 18.0 (d)
Broccoli	...	...	.....	.....	55	.....	.....	130	.....	.....	.....	.....	185	....
Cauliflower	...	...	.....	.....	81	42	247	.....	.....	.....	.....	.....	370	19.8
Collards	...	...	.....	.....	.....	64	130	162	64	.....	.....	.....	420	....
Radishes	...	...	.....	376	500	500	624	500	.....	.....	.....	.....	2,500	....
Spinach	...	...	.....	.....	29	106	107	60	.....	.....	.....	.....	302	14.5
Carrots	...	...	.....	.....	.....	.....	.....	1,453	71	405	71	.....	2,000	25.6 (a) 40.2 (b)
Total	255	...	4,892	27,895	52,437	76,520	77,635	99,215	87,474	138,821	73,770	8,033	646,947	....

[1] For the purpose of this tabulation cantaloups, strawberries, and watermelons are included.
(a) Bunched. (b) Without tops. (c) Dry. (d) Green, bunched.

(*Continued from Page 28*)

important factor in connection with the air transport of such products.

The Eastern flower market, compared with existing Florida and California markets, is very much undersupplied. Flower purchases per capita in the Northeast are substantially below per capita purchases in the Florida and California areas, due at least partly to differences in prices. The Northern market probably can be expanded greatly with supplies originating in Florida and California, although this probably would have to be induced by a reduction in prices.

The so-called succulents include a variety of small green plants and ferns. These are usually shipped in very small size to retail stores throughout the United States. Most of them are potted before retailed.

One of the leading producers in Florida of succulent plants believes many shipments of this type will move by air. He states that most shipments of succulents go to wholesale growers, although Florida growers have started supplying retail florists, and they receive frequent requests for rush shipments as retailers have no facilities for carrying a stock. He further says that the production of plants is increasing in Florida so that a larger variety can be supplied to Northern markets at times when stock is in demand.

In addition to the subtropical fruits, other fruits which are potential air cargo and which many think probably will increase considerably in importance as fruit crops for Florida are:

Lychee—Season, June 15 to July 15.

Loquat—Season, January to April.

Sapodilla—Season, April to August.

White sapote—Season, May to September.

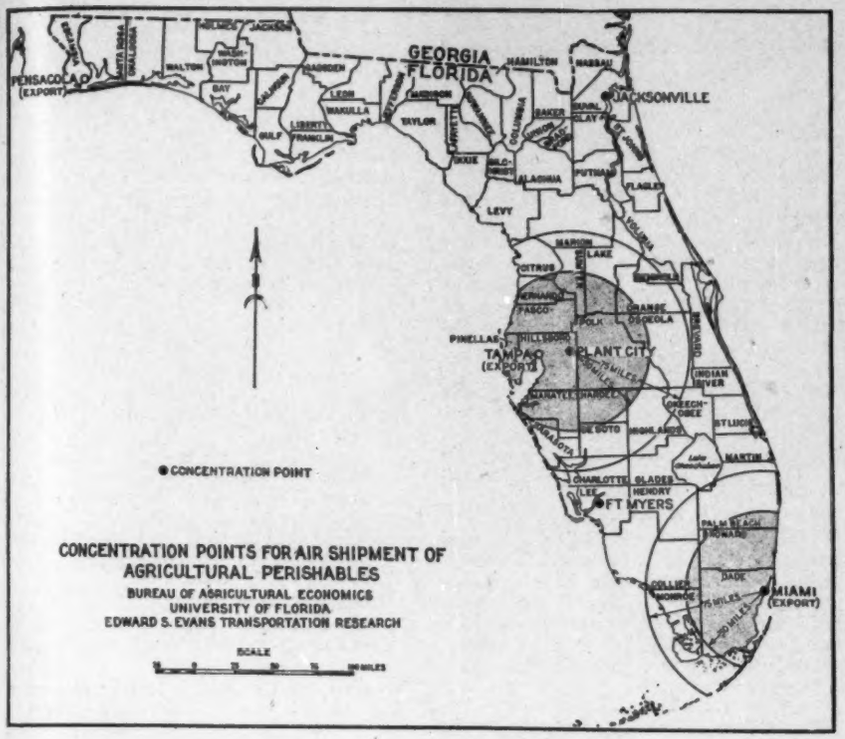
Carambola—Season, practically all year.

No quantitative data are available for these fruits. With the exception of loquats, they have been shipped to Northern markets in limited quantities. Plantings are being increased and these fruits may be more plentiful in future years. The loquat probably cannot be shipped successfully in volume to Northern markets except by airplane and this is one reason why it has not been planted in commercial quantities. It can be grown readily and will undoubtedly be grown more extensively if markets can be reached.

The crops mentioned in this section are in the category of commodities which, although not produced in great tonnage, probably will lend themselves better to air transportation than the bulk of the staple vegetables and citrus fruits. If air freight rates continue at current levels, these may be the only products that can be moved profitably by air. Tonnage of these commodities is relatively small but in many instances if they can be successfully moved to market, substantial increases in production may occur.

Fruits and vegetables are produced in all countries in Florida in various degrees of intensity. In the initial stages of air transportation it probably will be necessary that the fruits and vegetables to be shipped by air be concentrated near large existing airfields. For the most economical operation it is highly desirable that the concentration points be located in the center of intensive producing areas and in areas where the seasonal production of the commodities allows the maximum amount of tonnage. The proper location of the air freight concentration centers would minimize the expense of truck transportation and would make possible the most expeditious handling of the product from the field.

An analysis of Florida's agricutural



production shows that among the best locations for concentration points would be Miami and Plant City. These are not necessarily the only desirable air freight concentration points.

Within a radius of 75 miles of Miami and of Plant City, nearly all kinds of the fruits and vegetables produced in Florida are harvested in quantity. Seasonal production of all fruits and vegetables in these areas is at a minimum.

Some perishables are harvested in the Miami and Plant City areas during the entire year, but the quantity probably will not be sufficient to furnish as much payload as desirable from June to November, inclusive. During a part of these months an additional tonnage of perishables might be secured by stopping at least once on each flight at some concentration point located farther North. For example, planes operating from Miami could stop at Fort Myers and load semitropical products grown on Pine Island. Planes operating from Plant City could stop either at Jacksonville or Atlanta, and pick up additional tonnage. A stop at either of these cities may be especially advantageous during the months of May and June when quantities of sweet corn, tomatoes, peaches, and lima beans may be available within a 50-mile radius of Jacksonville or Atlanta.

Production of fruits and vegetables in Florida is seasonal. In the 1942-43 season about 85 percent of the total tonnage was harvested during December to May, inclusive. However, the tonnage of perishables harvested during the remaining six months is of such a character that a substantial portion of it might be moved by air.

Production of perishable agricultural products in Florida is particularly small during July, August, September, and October when less than three percent of the total tonnage is harvested. The lowest operating costs for an air freight line probably would be obtained through adjusting operations during the period of a seasonal low supply of agricultural perishables by:

(1) Haul Northward other perishable commodities such as sea food from Florida or the Caribbean Sea area.

(2) Reduce the number of flights so that as nearly as possible a full load may be hauled Northward; this reduction would be governed partly by trade demands and partly by the quantity and nature of the Southbound load.

(3) Encourage production of perishables that are harvested and sold during the season of usual short supply.

In the initial development of air transportation of perishables, it is highly desirable that the air freight concentration points be located in intensive fruit and vegetable producing areas as well as in areas where the seasonal variation in production is at a minimum. An analysis of Florida's agricultural production indicates Miami and Plant City as examples of desirable air freight concentration points. Practically all of the fruits and vegetables produced in Florida are harvested in quantity in the areas adjacent to these two concentration points. Some commodities are harvested in the Miami and Plant City areas during all months of the year. The production in Northern Florida and Southern Georgia complements the production in Southern Florida, seasonal production being lowest during the months of high production in the other areas, and some tonnage is produced when production in Southern Florida is extremely low. Planes operating from points in Southern Florida probably could stop at Fort Myers or other points farther north while planes operating from Plant City probably could stop at Jacksonville or Atlanta during May, June, and July and add to their Northbound loads of perishables.

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(*Continued from Page 5*)

An encyclopedia of travel information will be published by **Braniff Airways** for its travel agents. To be known as the Braniff *Travelog*, the book will include industrial, geographical, amusement and sporting news about each city and area served by the company's fleet.

National Skyway Freight Corporation has added five Douglas C-47s, purchased from Reconstruction Finance Corporation, to its fleet. All the planes have been modified as cargo carriers and licensed as freight planes. The company has also announced removal of its operations and maintenance base from Long Beach to the Los Angeles Municipal Airport.

The longest survey flight in airline history was concluded January 21, when a DC-4 *Clipper* of **Pan American World Airways** landed at LaGuardia Field after a 21,000-mile flight to Calcutta, India, and back. Aboard the plane were 24 technical experts of PAA, who visited 17 countries and made 28 stops in Europe, the Middle East, and India, in order to check the airports and facilities on the route to India over which the company plans to start operation within several months. The trip was 47 days en route.

The United States Aviation Underwriters, Inc., of New York has announced a new simplified aircraft liability insurance policy, for the exclusive use of aircraft dealers and fixed base operators. Under the new policy, the operator purchases all three liability coverages (public liability, passenger liability and property damage) for a single rate, instead of having to separate the passenger coverage from the other two, as he did formerly. New liability rates written on an hourly basis for dealers and operators have been reduced 50 percent from previously published rates. There is a similar reduction for private aircraft owners buying coverage on an annual basis.

An aviation market research organization, known as **Aeromarket Research Associates,** has been formed to conduct field surveys and special market studies for those commercially interested in the aviation market. An advisory board of consultants on problems calling for specialized knowledge and experience is available to clients of the company, which has its headquarters at Washington, D. C., and field associates throughout the country.

Airport planning has shown a sharp increase since the end of the war, according to figures compiled by the **Airport Planning Division of the Civil Aeronautics Administration.** The CAA has received requests from hundreds of towns for information regarding airport development, for details concerning Federal aid, and for airport engineers to inspect airport sites. Many towns have submitted master plans covering several years of development, and others are improving existing airport facilities.

A specially equipped B-17 *Flying Fortress* operated by a **Transcontinental & Western Air** crew, has left Miami, Florida, on a two-month flight, which is being carried out for the Electronics Subdivision of the Engineering Division of the Army Air Technical Service Command at Wright Field. The purpose of the trip is to seek out the worst thunderstorms and electrical disturbances in various parts of the world, under which conditions the readings of instruments in the plane will be recorded on film. This film will later enable Wright Field engineers to set up similar conditions for their tests to develop new static-elimination devices.

Arrangements have been completed for the establishment of the **Haire Airport Trophies** as permanent annual awards, it was announced by the National Aeronautic Association which will sponsor and administer them.

Georges Bidault, France's Minister of Foreign Affairs, and **Jefferson Caffery,** United States Ambassador, have signed a provisional accord, making it possible to begin airline services immediately between France and the United States. A permanent agreement will probably be concluded in the near future.

Pan-American World Airways' all-cargo *Clipper* run between Miami and Rio de Janeiro is being extended to Buenos Aires and is being increased to four trips weekly.

There is a possibility that the **Office of Defense Transportation** order, reserving 70 percent of the space on commercial airplanes Eastbound from the West Coast for returning military personnel, may end on April 1, with airlines reverting to full civilian operation two months earlier than was formerly expected.

The Secretary of State has announced that the President has approved the designation of the following persons as members of the **United States Section of the International Technical Committee of Aerial Legal Experts (CITEJA):** *United States Section: Chairman:* Stephen Latchford, Adviser on Air Law, Aviation Division, Department of State; *Members:* Russell P. Adams, Director of the Economic Bureau, Civil Aeronautics Board; John C. Cooper, Member of the Executive Committee of the International Air Transport Association; Arnold W. Knauth, Specialist in Maritime and Aviation Law, Department of Justice; Arthur L. Lebel, Chief, Communications Section, Aviation Division, Department of State; George C. Neal, General Counsel, Civic Aeronautics Board.

A British prewar airline and charter company, **Portsmouth Aviation,** has entered the manufacturing industry. Its first product is the *Aerocar,* which can be used as landplane, seaplane, or skiplane.

American Airlines has notified the Post Office Department that the first flight of **American Overseas Airlines,** from La-Guardia Field, New York, to Norway, Sweden and Denmark is to take place during the first part of this month, with mail stops being made at Oslo, Norway, Stockholm, Sweden, and Copenhagen, Denmark.

A specially equipped, high-altitude B-29 *Superfortress* at **Boeing Aircraft** in Seattle, Washington, has established what was believed to be the endurance record for stratosphere flight by heavier-than-aircraft. The record of three hours and 38 minutes at an altitude over 40,000 feet was made in conjunction with high-altitude flights being conducted by Boeing and the ATSC to test various types of equipment for future stratosphere bombers.

CONTINENTAL INAUGURATES AIR FREIGHT—First southbound shipment when Continental Air Lines began her new air freight service last month included several hundred pounds of hams, bacon, and milk-fed broilers consigned to an Albuquerque firm from the Cudahy Packing Company in Denver. Left to right are George Robertson, general manager of the Denver meat packing plant; Harry Betz, driver; and Louis Fahrenkamp, Continental station manager.

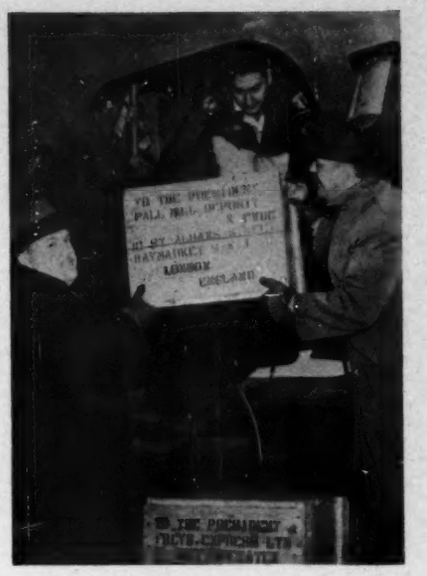
A newly developed cold starting fuel for aircraft operating in subzero temperatures which slices the time required for preparation and starting from as long as six hours to two minutes has been announced by the **Texas Company.** This fuel is designed to replace high octane gasolines for only the brief interval required to start.

Fifty aeronautical engineering scholarships will be awarded annually to the nation's outstanding high school graduates by the **Richard Ira Bong Memorial Foundation,** which was formed to honor the memory of the late war ace, Major Bong, and all American flyers who gave their lives in World War II. One student will be selected from each State and one each from the District of Columbia and Alaska. The Foundation, of which Captain Eddie Rickenbacker is the honorary national chairman, is a non-profit organization, to be assisted by contributions.

According to **Robert Ramspeck,** executive vice president of the Air Transport Association of America, the nation's airlines plan to have, in about one year from now, a fleet of planes three times the prewar number with seven times the seating capacity.

Ralph Starkey, PCA director of cargo sales, was the guest and principal speaker at the January 15th meeting of the Traffic Club of Jersey City, Inc. His subject was *Cargo-By-Air.*

Robinson Airlines has established twice-daily, round-trip air passenger service between Ithaca and Buffalo, New York.



ANOTHER AIR CARGO "FIRST" — Gilbert F. McKeon (left), vice president of the Manhattan Storage and Warehouse Company, and Edward F. May, assistant manager of long-distance operation for the company, cooperate in lifting some air cargo destined for London, Stockholm, and Copenhagen. The cargo was flown across the Atlantic on American Airlines' initial air journey to Scandinavia on February 1, thus making it the first civilian airborne goods flown from the United States to the Scandinavian countries.

On its first commercial flight last month, a Lockheed *Constellation* flown by **Pan American** cut one hour and 44 minutes from the round-trip flight time from New York to Bermuda and back. The plane made the flight in five hours and 48 minutes. Best previous time, set by a DC-4 of PAA, was seven hours and 32 minutes.

United Air Lines needs almost 450 new stewardesses by June 1. Requirements include: one year of college and one year of business experience; United States citizenship; height between five feet two and five feet seven inches; weight up to 135 pounds; age between 21 and 26 years; unmarried; and normal vision.

Newly-announced low insurance rates for spin-proof airplanes are "a long step on the road to popular private flying," according to **John H. Geis,** assistant to the administrator for personal flying development, CAA.

The **New England Council's Third Aviation Conference** will be held at the Hotel Statler, Boston, on April 12.

The Department of State has announced that a bilateral agreement has been concluded with the **Czechoslovak Government,** providing for so-called Fifth Freedom traffic privileges. The agreement became operative on January 3, 1946.

Swedish Airlines and **Danish Airlines** have announced the opening of executive offices at Marguery Hotel, 270 Park Avenue, New York City. Their reservations and information offices are at 630 Fifth Avenue, in the same city.

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Bermuda Air Pact

(*Continued from Page 7*)

Further, there is provision (Article 9) that any dispute between the two Governments on the agreement or the Annex shall be referred to the PICAO or its successor for an advisory report.

There is no time limit on the agreement, but either nation may at any time request consultation with the other with a view to making amendments which may be desirable in the light of experience.

Pending the outcome of such consultation, either nation may give notice to the other of its desire to terminate the agreement. In the absence of an agreement as to the desired amendments the agreement can be terminated twelve months after the giving of notice. But termination of the agreement in this way will not affect the traffic rights which U. S. air carriers may exercise at any of the leased bases which are to be opened for civil use.

9. The Annex

This is a most important part of the agreement from an operative viewpoint. It is divided into five sections:

I—Rights
II—Rates
III & IV—Routes
V—Changes of gauge

I—Rights. This section sets out that airlines of the United States and the United Kingdom shall enjoy traffic rights between the territories of the two countries on routes outlined in Section III of the Annex in accordance with the principles stated in the Final Act, and in the Annex.

II—Rates. The two countries have agreed on regulation to ensure economic operation and to prevent rate wars resulting from unfair and uneconomic rates. The CAB has announced its forthcoming decision approving the traffic and rate conference machinery of the International Air Transport Association (IATA) for a period of one year from February, 1946. Under United States law, rates agreed upon by IATA in all cases where United States air carriers are parties are subject to CAB approval. Furthermore, the Executive Department of the United States (including the CAB) has agreed to seek, from Congress, power to fix fair and economic rates for United States air carriers on international air services.

A most important principle has been agreed to in respect to rate regulation. In all cases where disagreement arises as to any rates between points under the jurisdiction of the United Kingdom and points under the jurisdiction of the United States, consultation between the aeronautical authorities of the two countries is provided to the end that, if possible, agreement as to the proper rate can be reached, and such agreement made effective within the respective constitutional powers and obligations of the Governments.

New rates proposed by any U. K. or U. S. airline are required to be filed with both Governments thirty days before the effective date of such rates. If agreed by both Governments the new rate can go into effect at once.

If, before the CAB acquires its rate-fixing powers, it disagrees with a rate proposed by a U. K. carrier and approved by the U. K. Government or the U. K. disagrees with a rate proposed by a U. S. carrier, and if after consultation the two Governments do not agree, or, if after agreement it cannot for any reason be made effective, the party objecting to the rate "may take such steps as it may consider necessary to prevent the inauguration of continuation of the service in question at the rate complained of."

After the CAB acquires rate-fixing powers, if after thirty days either the CAB or the U. K. Government cannot agree on a rate proposed by an air carrier or carriers of the other nation, the proposed rate, may, nevertheless, go into effect provisionally at the discretion of the Government of the air carrier concerned pending settlement of the disagreement either by further consultation or by an advisory report from the PICAO which each party agrees to use its best efforts to put into effect.

III—Routes. Under this heading both the United Kingdom and the United States have set out lists of proposed air routes which touch their two territories. Although some of these air routes are already in operation, some may be opened shortly and others may not come into operation for some time, all are set down as an indication of how the rights granted in Section 1 of the Annex may be exercised.

IV—Route Changes. This section lays down that any changes on the routes of one nation in the territory of the other will be made only after consultation and agreement between the aeronautical authorities. Other route changes in third countries may be made at any time, provided that prompt notice is given by the one country to the other of such changes. Any disagreement which may arise and cannot be resolved by the aeronautical authorities of the two countries shall be referred to PICAO for an advisory report. In addition, each country will keep the other informed of new route certificates and authorities extended to their own air carriers.

V—Change of Gauge. On any long, through, route it may be that it will be more economical to handle the onward carriage of traffic from key points in smaller aircraft than that used on the prior part of the trip. The conference has recognized this possibility, but has provided that in such case the smaller aircraft will operate only in connection with the larger aircraft arriving at the point of change so as to provide a connecting service, specifically scheduled as such, and the smaller aircraft will thus normally wait on the arrival of the larger aircraft at junction points.

10. Leased Air Bases

VI—Frequencies. The conference has placed no specific limitation on frequencies. Each nation operating under the principles agreed to is to be free to determine for itself the number of frequencies which are justified; services being related to traffic demands.

Heads of agreement relating to the civil use of leased air bases have been drawn up and initialed with a view to the ultimate conclusion of a formal agreement.

When the United Kingdom undertook, in 1940, to lease to the United States certain areas in Newfoundland, Bermuda and the Caribbean area for naval and air bases, the subsequent agreement expressly provided that, except in special circumstances or by agreement between the governments concerned, commercial aircraft should not be allowed to operate from the airfields in the leased areas. It also provided that no commercial activities should be conducted within the leased areas other than with the consent of the governments concerned.

After the lease of these bases, the United States constructed a large airfield at each of them. With the end of the war there are obvious advantages in opening, for use by civil aircraft, airfields in the leased areas in territories in which no other satisfactory civil airfields are available. Such opening would contribute both to the development of air transport and to the territories concerned. But where satisfactory airfields already exist there would not be the same reason for arranging for commercial aircraft to use the base airfields.

Some discussions on this subject between the Governments of the United States and the United Kingdom were held in the autumn of 1945. Thus, when arrangements for the Bermuda Conference were made it was suggested that the opportunity should be taken to deal with this question as well as other more general questions relating to civil aviation.

As a result of the conference, when the agreement now envisaged is concluded, the airfields at the leased bases in Bermuda, Antigua, St. Lucia and British Guiana will be opened to regular use by civil aircraft. Other similar airfields in Trinidad and Jamaica will be available for use as bad weather alternates in case of necessity.

The opening of the bases to civil aircraft use is contingent upon the making of satisfactory agreements with Newfoundland and Canada regarding the use by civil aircraft of airfields in Newfoundland and Labrador, namely Gadner, Harmon, Argentina and Goose Bay.

There have been prolonged discussions on the many difficult questions arising on the commercial use of the airfields. These discussions have left some remaining difficulties and complicated legal problems which will form the subject of further discussions between the two Governments.

Agreement has, however, been reached in principle as to the terms on which British, United States and other aircraft should be allowed to use the airfields. The positions of both the United Kingdom and the United States in regard to the exercise of traffic rights on the bases have been safeguarded and provision has been made to insure that the United States, which will maintain the airfields for military purposes shall enjoy "most-favored-nation" treatment. Thus it is agreed that no other civil air carrier, including civil air carriers of the United Kingdom, will be granted any greater or different traffic rights at the bases than are granted to United States civil air carriers at such bases, with certain exceptions permitted in the case of United Kingdom traffic between two points under its jurisdiction. There is also provision that the United States shall have the right to carry between the bases in its own civil aircraft certain personnel traveling on business connected with the leased bases.

Other provisions of the heads of agreement relate to the right of either Government to suspend, for military reasons, commercial operations at the base airfields, and to the right of the United States military authorities to insure that no steps are taken in connection with commercial air operations which would prejudice in any way the military use of the base. There is also provision that if the U. S. wish at any time to relinquish the responsibility for maintaining the base airfields the U. K. or the colonial governments concerned would have the right to take over that responsibility.

(Trade Mark)

LANDING FEES

Scheduled and Non-Scheduled

ALBANY AIRPORT
Albany, New York

For the first scheduled trip arrivals, $50; the second and each additional trip, $25. These apply to all scheduled trip arrivals on which aircraft have licensed standard gross weights of 50,000 pounds each, or less, and are scheduled to be operated. With respect to any scheduled trip arrival on which aircraft having a gross weight of more than 50,000 pounds each are scheduled by the lessee to be operated, the monthly fee for that scheduled trip arrival shall be increased by one dollar for each 1,000 pounds of such excess weight (500 pounds or any larger part of 1,000 pounds to be counted as if a whole 1,000 pounds, and any smaller part to be disregarded). Excess payment is to be computed on the basis of one aircraft.

BIRMINGHAM MUNICIPAL AIRPORT
Birmingham, Alabama

Airlines are required to pay by scheduled landing: $100 per month for the first, $50 for the second, and $25 for each additional one. No landing fees for cargoplanes have been established.

LOGAN AIRPORT
Boston, Massachusetts

One hundred dollars each for the first five schedules; $50 each per month for the next four schedules; $25 per month thereafter. Hangars are owned by companies on land leased from the Department of Public Works at the rate of about six cents per square foot.

BUFFALO MUNICIPAL AIRPORT
Buffalo, New York

For each scheduled airplane trip arrival and departure of aircraft having licensed standard gross weight not exceeding 25,000 pounds, $50 per month per schedule. For each scheduled airplane trip arrival and departure of aircraft having licensed standard gross weight exceeding 25,000 pounds, an additional charge of $2 for each 1,000 pounds licensed standard gross weight. For each additional flight or section of aircraft and for all non-scheduled commercial aircraft not exceeding 25,000 pounds standard gross weight, the sum of $1.67 for each landing and take-off. For aircraft exceeding 25,000 pounds standard gross weight, one-thirtieth of the sum due and payable for such aircraft were the same on the regular schedule for that month. Non-scheduled commercial aircraft exceeding 25,000 pounds standard gross weight an additional charge for each landing and take-off of seven cents each for each 1,000 pounds licensed standard gross weight in excess of 25,000 pounds.

These landing fee schedules do not apply to United States Government-owned planes; nor transient planes not landing for commercial purposes.

CHICAGO MUNICIPAL AIRPORT
Chicago, Illinois

For first three schedules, $200 per month each; for next three schedules, $150 per month each; next three schedules, $100 per month each; next three schedules, $50 per month each; all in excess of the foregoing, $25 per month each. For weights of 25,000 pounds or more there are additional charges.

LUNKEN AIRPORT
Cincinnati, Ohio

According to the ordinances of the City of Cincinnati only those cargoplanes, regardless of ownership, which operate with scheduled landings at Lunken Airport must pay a fee of $75 per year or $6.25 per month for each daily scheduled landing. This also applies to scheduled passenger operations.

Howard E. Crush, superintendent of the airport, writes AIR TRANSPORTATION: "We admit the fee is ridiculously low but do not plan to make any upward revisions until a new municipal airport is completed, which appears to be within the next two years."

CLEVELAND MUNICIPAL AIRPORT
Cleveland, Ohio

If cargo flights operate on a regular schedule, the landing fee is $150 per month for each arrival, payable in advance. Itinerant or non-scheduled cargo flights pay a landing charge of $7.50 per landing if on the ground for service only and not picking up Cleveland cargo. If cargo is loaded on board at Cleveland, the fee is $10 per landing.

LOVE FIELD
Dallas, Texas

Section Six of an ordinance soon to be adopted provides: "That a fee in the amount hereinafter set forth shall be paid by owners, or operators of all air transport lines, air feeder lines and air cargo lines, scheduled or non-scheduled, operating into and/or from Love Field, or using its facilities for the purpose of taking off or landing its aircraft, in scheduled or non-scheduled operations. The fee provided for herein shall be as follows: eight cents per 1,000 pounds per landing, and all landing charges shall be based upon the known gross weight of the aircraft according to the manufacturer's data."

DETROIT CITY AIRPORT
Detroit, Michigan

There are no special landing charges for cargoplanes. Don W. Martin, airport manager, writes: "We do feel that these landings should be encouraged and they pay only for the services we render to them in the way of hangar space and field service. If we do decide at some future date to make a landing fee charge, it will be on the following basis as is now charged to the airlines: $100 per scheduled trip arrival for each of the first four; $75 from the fifth through the twelfth; $50 from the 13th through the sixteenth; and $25 for each after the seventeenth."

LOS ANGELES AIRPORT
Los Angeles, California

Ten dollars per departure for each plane engaged in air cargo service, up to and including a gross weight of 25,500 pounds, plus a charge of 15 cents per 1,000 pounds or fraction thereof for the gross weight of each plane in excess of 25,500 pounds. For all planes engaged in charter passenger service, a charge shall be made for each departure of five percent of the gross receipts of the owner or operator of said plane derived from business originating at the airport, exclusive of Federal transportation taxes. For planes engaged in a combination service of cargo and passengers, whichever of the foregoing is greater.

NEWARK AIRPORT
Newark, New Jersey

The owner or operator of any aircraft using Newark Airport (except as provided in leases) for commercial purposes or a transient user shall pay for such use in accordance with the following classification and rate of charges. For each landing and take-off inclusive of such aircraft at said airport:

Class	*Rated Gross Weight (in lbs.)*	*Charge*
A	5,000	$1.50
B	8,000	4.00
C	12,000	8.00
D	16,000	12.00
E	20,000	16.00
F	25,000	20.00
G	30,000	22.50
H	35,000	25.00
I	40,000	27.50
J	45,000	30.00
K	50,000	32.00
L	60,000	35.00
M	70,000	37.50
N	80,000	40.00
O	90,000	45.00
P	100,000	50.00

For the purpose hereof, the "*rated gross weight*" of any aircraft shall be the rated gross weight of such aircraft as determined by the Civil Aeronautics Authority. Anyone flying aircraft for revenue producing purposes will be considered as a commercial user. The owner or operator of such aircraft which makes regular landings at said airport, in lieu of paying at the rate specified in Paragraph 2 of this regulation for each landing and take-off inclusive, may pay in advance for 30 landings and take-offs, inclusive within a 30-day period as follows:

Class		*Class*	
A	$ 30	I	$650
B	100	J	700
C	180	K	750
D	275	L	800
E	350	M	850
F	500	N	900
G	550	O	950
H	600	P	1,000

For landings and take-offs inclusive within a 30-day period above 30, the amount shown opposite each class in the

LANDING FEES

City	Airport	Scheduled: 1st Trip per Month	Scheduled: 2nd Trip per Month	Scheduled: 3rd Trip per Month	Scheduled: Gross Weight (lbs.)	Non-Scheduled: Per Landing	Non-Scheduled: Gross Weight (lbs.)
Albany	Albany	$50.00	$25.00	$25.00	50,000	Not available	.....
Birmingham	Birmingham	100.00	50.00	25.00	.....	Not available	.....
Boston	Logan	100.00	100.00	100.00	.....	Not available	.....
Buffalo	Buffalo	50.00	50.00	50.00	25,000	$1.67	25,000
Chicago	Chicago	200.00	200.00	200.00	25,000	Not available	.....
Cincinnati	Lunken	6.25	6.25	6.25	.....	Not available	.....
Cleveland	Cleveland	150.00	150.00	150.00	.....	7.50[1]	.....
Dallas	Love	See footnote[2]	.....	.....	.....	See footnote[2]	.....
Detroit	Detroit	100.00	100.00	100.00	.....	No charges	.....
Los Angeles	Los Angeles	See footnote[3]	.....	.....	25,500	See footnote[3]	25,500
Newark	Newark	See footnote[4]	.....	.....	.....	See footnote[4]	.....
St. Louis	Lambert-St. Louis	100.00	100.00	100.00	.....	No charges	.....

[1] If cargo is loaded, the fee is $10.
[2] 8c per 1,000 lbs.
[3] $10 per departure per cargo plane. Consult article for additional information.
[4] Consult article for detailed information.

foregoing paragraph shall be reduced as follows:

31 to 60, by 10%	121 to 150, by 40%
61 to 90, by 20%	151 to 180, by 50%
91 to 120, by 30%	All above, by 50%

Where aircraft of individual owners or operators fall in different weight classifications as indicated above and the total landings and take-offs inclusive of such planes are 30 or more within a 30-day period, the operator may pay on a prorated basis using the same charges as stipulated in the two preceding paragraphs.

All charges specified herein shall be paid at the office of the airport manager at the Newark Airport, unless a satisfactory credit account covering such charges has been established with the Department of Revenue and Finance of the City of Newark before flight clearance for take-off may be issued, provided, however, that payment of the charges specified herein may be waived by said manager with respect to aircraft which have made a forced or emergency landing at said airport and satisfactory evidence has been presented to said manager showing the necessity for such forced landing; or aircraft engaging in a flight for a charitable, governmental, patriotic, or emergency purpose solely; and provided further that the payment of the charges specified herein may be waived by said manager for a take-off and landing following an original landing, which second maneuvers are for the necessary testing of engine or equipment, and provided such test flight is less than 20 minutes in duration, is without passengers, and at all times is within visual observation of the traffic control tower operator.

LAMBERT-ST. LOUIS MUNICIPAL AIRPORT
St. Louis, Missouri

If cargo flights are scheduled, $100 per month each for first two schedules; $50 per month each for the next four schedules; $25 per month each for all additional schedules. There are no landing charges for unscheduled flights.

NOTE: AIR TRANSPORTATION *will publish landing fees for cargoplanes as they are received. Many airport officials have reported that such fees are still in the process of being drawn up.*

New PCA Planes Have 57 Seats

Another innovation in air passenger comfort has been effected by Pennsylvania-Central Airlines—a hostess-to-passenger public address system on its new four-engined transport planes.

At the same time it was announced by PCA that the big *Capitaliners* have had their seating capacity increased to 57. According to Luke Harris, vice president in charge of engineering and maintenance, the addition of one more seat was made through only minor adjustments in the cabin design. He declared that the result gave better balance and weight condition.

AIR COMMERCE

AIR EXPRESS, REA

Completing an unbroken record of monthly increases in air express traffic handled through New York in 1945, the Air Express Division of Railway Express Agency announced a rise of 13 percent in number of shipments handled in December over the same month, 1944. A total of 101,712 shipments were handled during the month. Gross revenue for this period amounted to $459,808, an increase of 5.6 per cent. Over 730,000 pounds were carried in this air express traffic.

MID-CONTINENT

Mid-Continent Airlines, Inc., has reported that unaudited reports indicate operating revenues for the calendar year ending December 31, 1945, were $3,216,829.84 as compared with operating revenues of $1,980,978.50 for 1944, an increase of 62 percent. Net profit for the year, after provision for income taxes, was $171,973.46 or 44.4 cents a share on 389,398 as compared with the net profit of $138,976.27 or 36 cents a share on the same number of shares for 1944.

WESTERN

The airline has announced that 100,515 shares—98.1 percent of 102,488 additional shares of capital stock offered to Western Air Lines shareholders—had been subscribed at the expiration of an 18-day subscription period ending January 15. The offering was not underwritten. The proceeds will augment the working funds of the airline by $2,010,300.00. Of this amount, $1,087,460, or 54.1 percent, was subscribed by officers and directors of the company.

SUCCESSFUL BID—Carlos Maristany (right), Cuba's Under-Secretary of Communications, congratulating Donald W. Stewart, vice-president of Expreso Aereo Interamericano, S. A., on the airline's successful bid to carry Cuba's air mail. Luis Machado, Expreso's general counsel, looks on. The airline will become Cuba's sole carrier of international air mail to the United States on March 1 under a resolution adopted by the Cuban Ministry of Communications, following receipt of Expreso's low bid of 8.3 cents per pound, contrasted with $4 per pound heretofore.

AIR TRANSPORTATION Congratulates

Col. C. C. West, Jr.

J. H. Carmichael

E. I. Whyatt

W. Fiske Marshall

Dr. E. J. Passos

Gen. E. E. Adler

EXECUTIVE

COLONEL C. C. WEST, JR., back again with Continental Air Lines after four years of active duty with the Army Air Forces. He has assumed the position of senior vice president. His last assignment was that of Assistant Deputy Chief of Staff-Personnel, with the Air Transport Command.

JAMES H. CARMICHAEL, former barnstorming pilot, elected to the executive vice presidency of Pennsylvania-Central Airlines. He formerly held the post of vice president-operations. Carmichael, who is 38, is one of the youngest top executives in the country.

COLONEL GEORGE E. GARDNER, elected executive vice president of National Airlines and a member of the Executive Committee.

E. I. WHYATT and W. FISKE MARSHALL, named respectively executive vice president and vice president-operations of Northwest Airlines. Whyatt previously held the position of vice president and treasurer, and Marshall that of general operations manager.

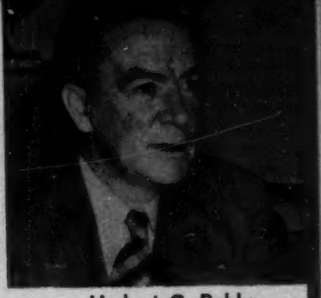
DR. EDISON JUNQUEIRA PASSOS, prominent Brazilian civil engineer, now executive vice president of Aerovias Brasil, associate company of TACA. A graduate of Brazil's National School of Engineering, he served as a professor at the National University, president of the Brazilian delegation to the Inter-American Congress of Municipalities, and president of the Engineering Club of Brazil.

MAJOR GENERAL ELMER E. ADLER, retired from the United States Army after 37 years' service, now holding down the job of vice president and general manager of Aerovias Braniff, Mexican associate airline of Braniff Airways. Early last year, General Adler was chosen by the American State and War Departments for the Army-Navy mission to Mexico, serving as chief of the Air Section.

ROBERT F. DAVIS, promoted from director of production to vice president and general manager of the Jordanoff Corporation. He is graduate of the Universities of Chicago and Vienna.

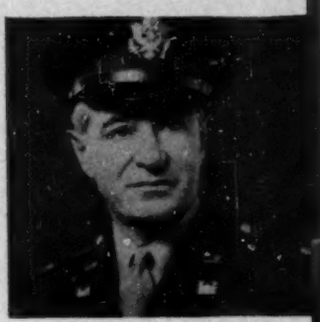
HERBERT C. DOBBS, former traffic manager of Pan American Airways' Latin Division, appointed vice president in charge of traffic for National Airlines. He was a combat pilot during World War I.

CHARLES L. GALLO, named vice president-traffic for TACA. For the past year-and-a-half he served as vice president and general manager of the airline's Central American and Caribbean operations. In his new post he will have supervision of traffic, sales promotion, advertising and publicity for all of Latin America.


Herbert C. Dobbs

Charles L. Gallo

Peter N. Jansen


Maj. Victor T. Nydele

Warren R. Smith

W. H. Wooten

PETER N. JANSEN, formerly director of manufacturing of the airplane division of Curtiss-Wright, elected vice president-operations of Bendix Helicopter. His aviation work dates back to 1916 when he first joined the old Curtiss Aeroplane and Motor Company.

COLONEL RICHARD E. FELL and ROBERT M. AVERILL, respectively appointed vice president in charge of PCA's Eastern Region and vice president in charge of the Western Region. Fell, a flyer since 1928, has been manager of the aviation departments of national corporations; Averill is a former attorney and FBI agent.

A. FELIX DU PONT, JR., HARRY W. LUNGER, and ARTHUR P. DAVIS, elected to the Board of Directors of All American Aviation. The board has been increased from eight to 11 members.

LIEUTENANT COLONEL THOMAS M. MURPHY, returned to Western Air Lines to serve as assistant to the company's president. He served with the ATC for 3½ years, and contributed greatly to the laying out of its worldwide network of air routes.

HAYES DEVER and THOMAS T. HINMAN, elevated to the respective PCA posts of executive assistant to the president and assistant to the executive vice president. Dever was elected secretary two years ago; Hinman is former Buffalo regional traffic manager.

W. H. FOBES, JR., named special assistant to the vice president-traffic of NWA. He joined the airline in 1944 and served as district traffic manager at Chicago.

MAJOR VICTOR T. NYDELE, formerly of the Corps of Engineers, United States Army, appointed Midwestern Division manager of the Luria Engineering Corporation. Prior to the war he operated as an engineer and constructor in the Middle West for two decades.

C. H. KIBBEE, named assistant treasurer of American Airlines. Active in the investment business since 1929, he served as a naval lieutenant during the war.

ADVERTISING AND PUBLIC RELATIONS

WARREN R. SMITH, who served overseas with the Ninth Air Force, appointed public relations manager of the Fairchild Aircraft Division. He was associated with a New York public relations counsel and Remington Rand, Inc., before induction into the Army.

WILLIAM H. WOOTEN, former director of public relations for Consolidated Vultee's Louisville division, now serving as manager of the News Bureau of Eastern Air Lines' Southern Region. He is a graduate of the University of North Carolina's School of Journalism.

W. A. Rogers

George T. Cussen

Lt. Cmdr. Gordon MacLaren

L. S. Reid

Marvin J. Parks

Lt.-Col. H. K. Miller

J. RAYMOND BELL, director of advertising and public relations for PCA, designated publicity chairman of the Roosevelt Birthday Celebrations for the fourth time.

GAIL G. PHILLIPS, wartime Navy flyer and former newspaper and advertising man, appointed promotion manager in PCA's public relations staff. He will handle national promotions and advertising tie-ups.

WILLIAM A. ROGERS, veteran naval officer who served in both World Wars, named public relations representative of Railway Express Agency. Prior to service in the war, Rogers had been consultant in the Air Express Division.

TRAFFIC

GEORGE T. CUSSEN, until recently a lieutenant colonel in the Army Air Forces and a veteran of 17 years' airline experience, now holding the position of general traffic manager for TACA, United States and Caribbean Region. He began his airline career with Maddux Airlines in Los Angeles which later merged with TWA.

ROBERT B. BELL, former Marine lieutenant colonel, back again with American Airlines as chief traffic dispatcher. In New York he was a New York traffic representative for AA.

LIEUTENANT COMMANDER GORDON MacLAREN and LIEUTENANT COLONEL L. S. REID, back in civvies in the positions of district traffic manager for NWA in the respective cities of New York and Chicago. MacLaren returns to his old job; Reid's prewar post was that of assistant to the general traffic manager.

CHARLES P. KNECHT, appointed district traffic manager for Delta Air Lines in Cincinnati. Recently discharged from the Navy, he had been previously associated with Delta for 10 years.

JAMES B. ADAMSON, named Long Island traffic manager for American Airlines. The post is a newly created one.

CARGO

H. W. KROPP and R. L. MEYER, returned to United Air Lines after more than three years with the Naval Air Transport Service. Both held the rank of lieutenant. Kropp is area manager at Chicago and Meyer area manager at Cleveland.

SALES

MARVIN J. PARKS, appointed export manager for the Fairchild Engine and Airplane Corporation. A former airline pilot and test pilot, he has been associated with the Airplane Division at Hagerstown, Maryland, for the past year-and-a-half, working on the C-82 *Packet* project.

HERBERT D. FORD, American Airlines' regional passenger traffic manager in Chicago, named director of passenger sales. He has been with AA since 1931 when he joined as a traffic representative in Cincinnati.

ROBERT R. NADAL, at his desk once more as sales manager for the Culver Aircraft Corporation. He was recently discharged from the Navy.

LARRY COOPER, appointed general sales manager for Consolidated Vultee's Stimson Division at Wayne, Michigan. He joined Convair six years ago and has held executive positions since 1943.

HERBERT F. MILLEY and ROBERT KINZEL, named by Pan American Airways as assistants to the United States sales manager, the latter to handle *Clipper* air express matters. Before the war, Milley managed PAA's sales offices in Seattle and San Francisco; Kinzel was formerly assistant to the express traffic manager.

OPERATIONS

LIEUTENANT COLONEL HARVEY K. MILLER, appointed superintendent of operations for the Air Cargo Transport Corporation. Prior to his entrance into the Army, he was assistant supervisor of maintenance for American Airlines.

MISCELLANEOUS

WARREN L. BAKER, GEORGE B. BOOCHEVER, COLONEL L. H. BRITTIN, and E. F. SITTERLEY, named to the following posts in the New York Board of Trade: Baker, manager of the Socony-Vacuum Oil Company's Aviation Department—vice president and member of the Executive Committee of the Board of Directors; Boochever, international lawyer and contributor to AIR TRANSPORTATION—general counsel to the Aviation Section; Brittin, director of Edward S. Evans Transportation Research—air transportation consultant and member of the Executive Board of the Aviation Section; Sitterley, publisher—chairman, Export Committee, Aviation Section.

NEW YORK AIR CHIEF

CHARLES R. HAFFENDEN, New York City's new Commissioner of Marine and Aviation. A former commander in the United States Navy, Haffenden also served as New York State director of the American Federation of Little Business. In his present official post he succeeds John McKenzie who retired on the first of the year.